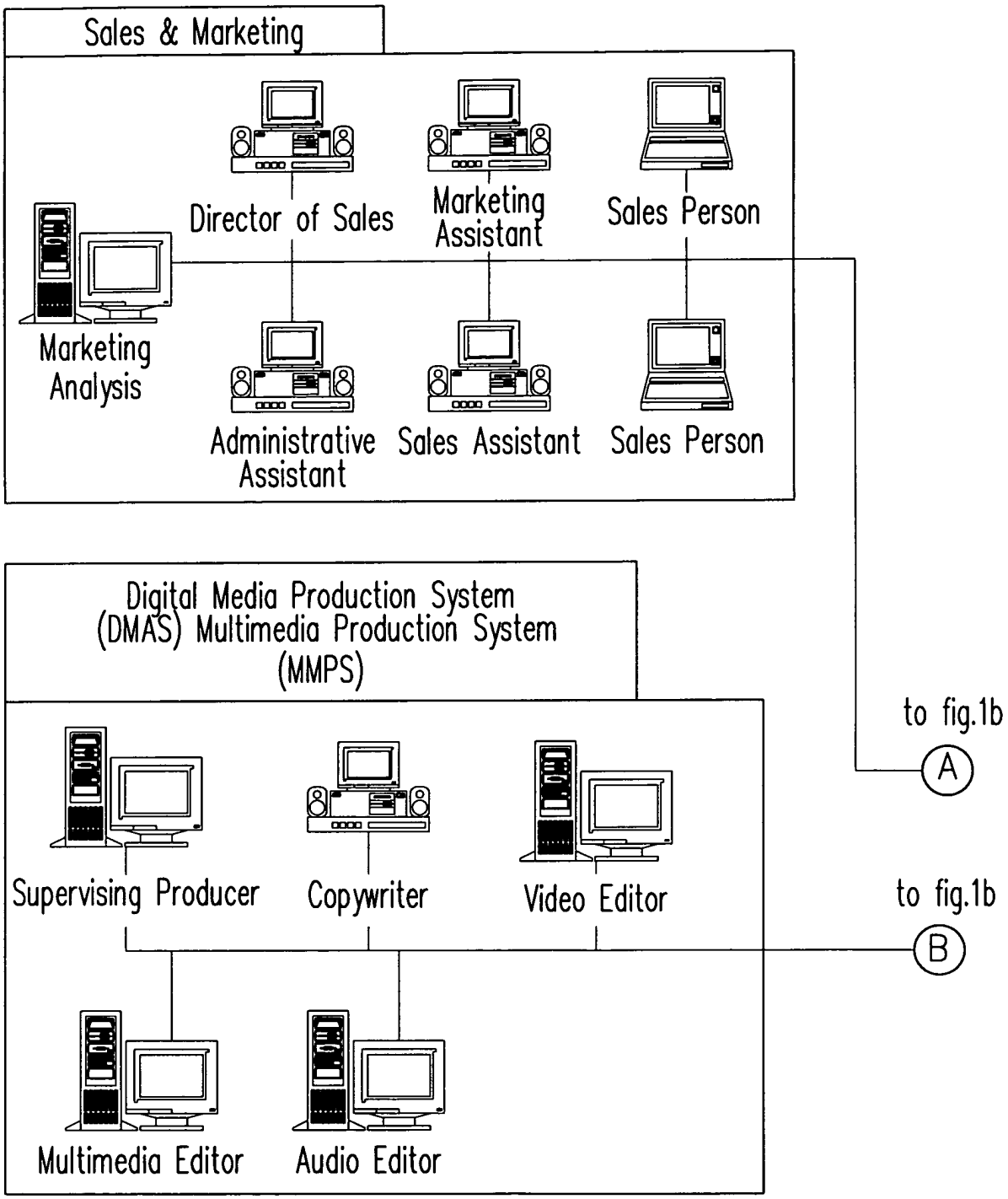

Sales & Marketing
Director of Sales
Marketing Assistant
Sales Person
Marketing Analysis
Administrative Assistant
Sales Assistant
Sales Person
Digital Media Production System (DMAS) Multimedia Production System (MMPS)
Supervising Producer
Copywriter
Video Editor
Multimedia Editor
Audio Editor
to fig.1b
A
to fig.1b
B

Fig. 1a

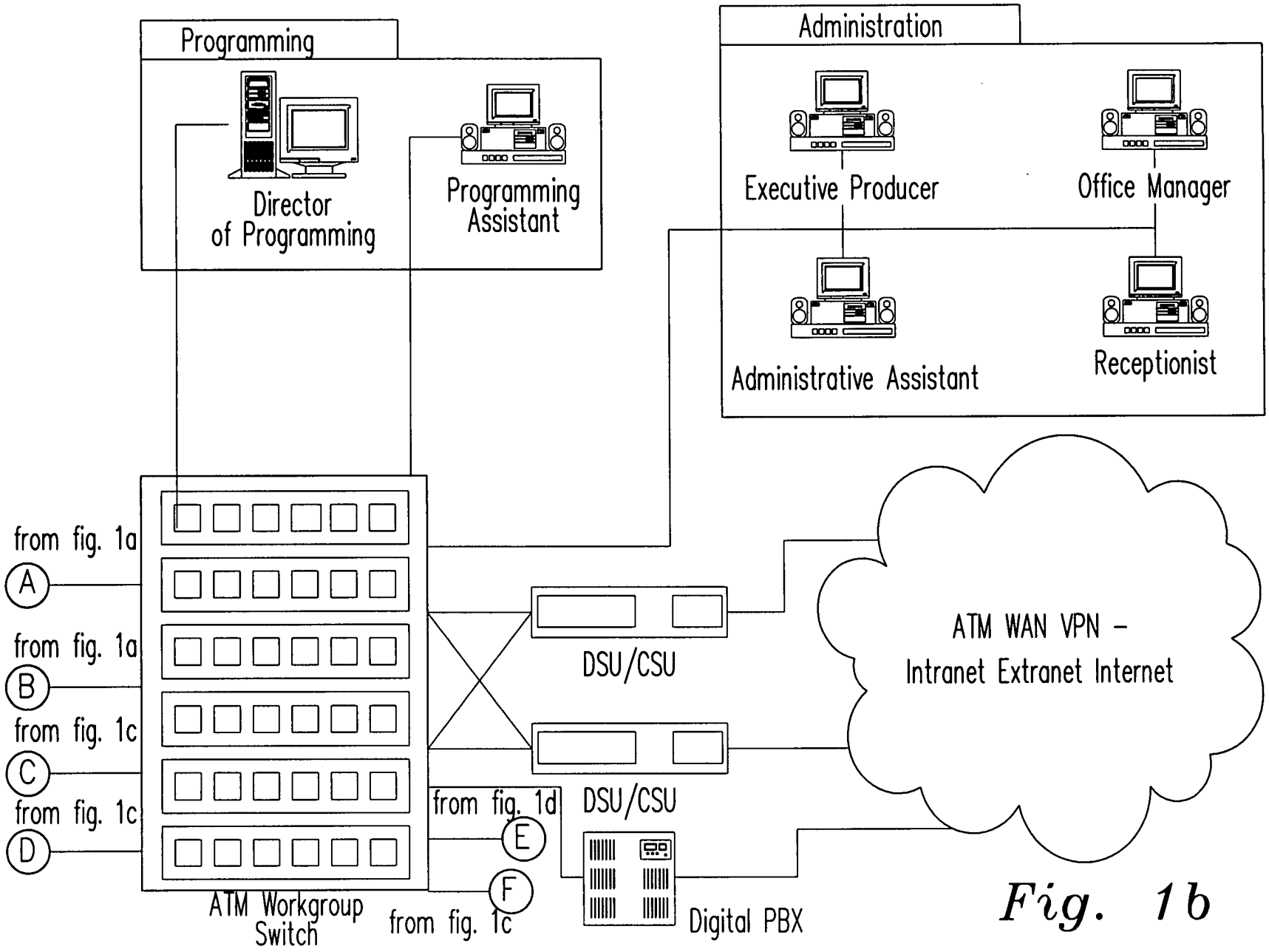

Programming
Director of Programming
Programming Assistant
Administration
Executive Producer
Office Manager
Administrative Assistant
Receptionist
from fig. 1a
A
from fig. 1a
B
from fig. 1c
C
from fig. 1c
D
ATM Workgroup Switch
DSU/CSU
DSU/CSU
from fig. 1d
E
F
from fig. 1c
Digital PBX
ATM WAN VPN -
Intranet Extranet Internet

Fig. 1b

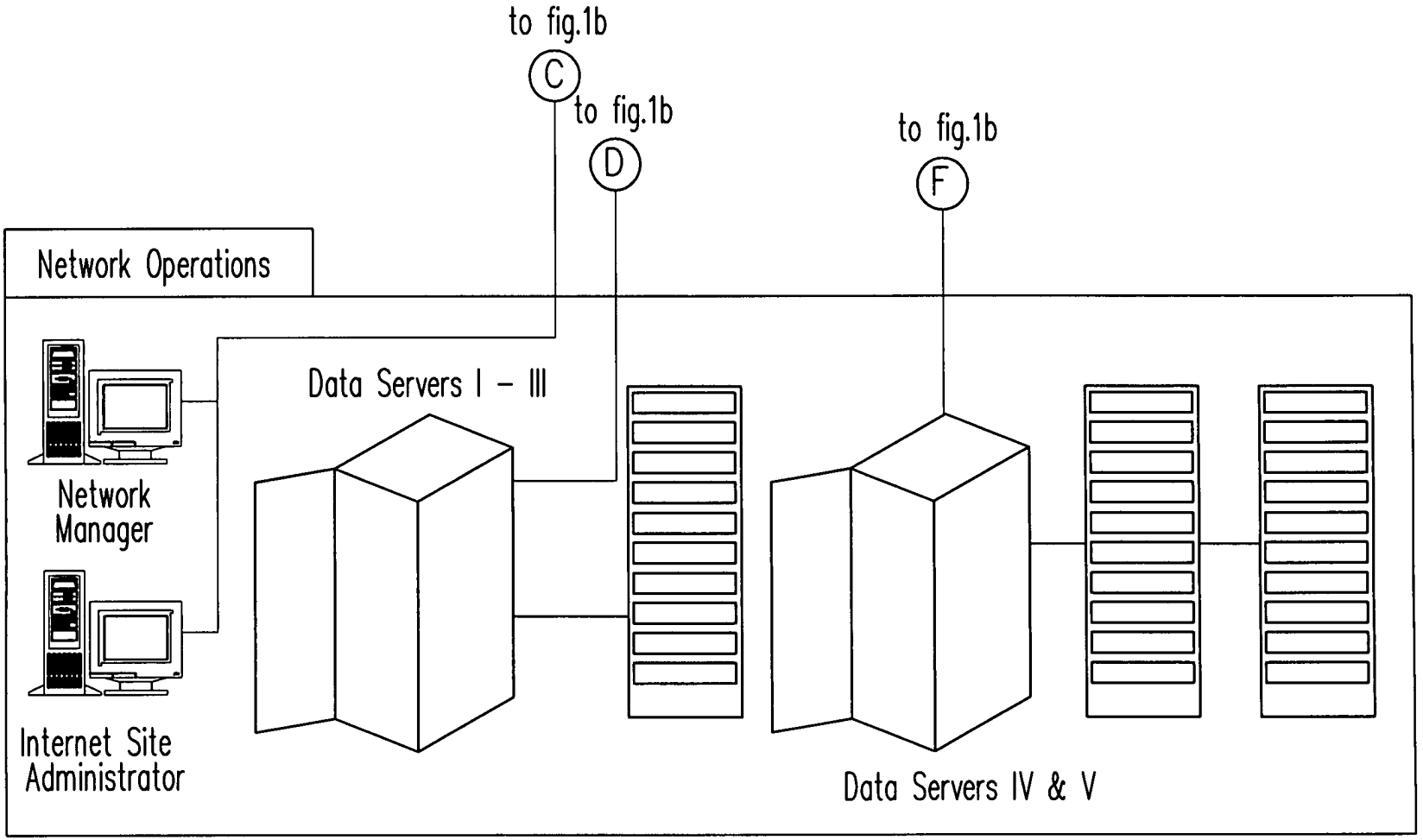

to fig.1b
C
to fig.1b
D
to fig.1b
F
Network Operations
Data Servers I – III
Network Manager
Internet Site Administrator
Data Servers IV & V

Fig. 1c

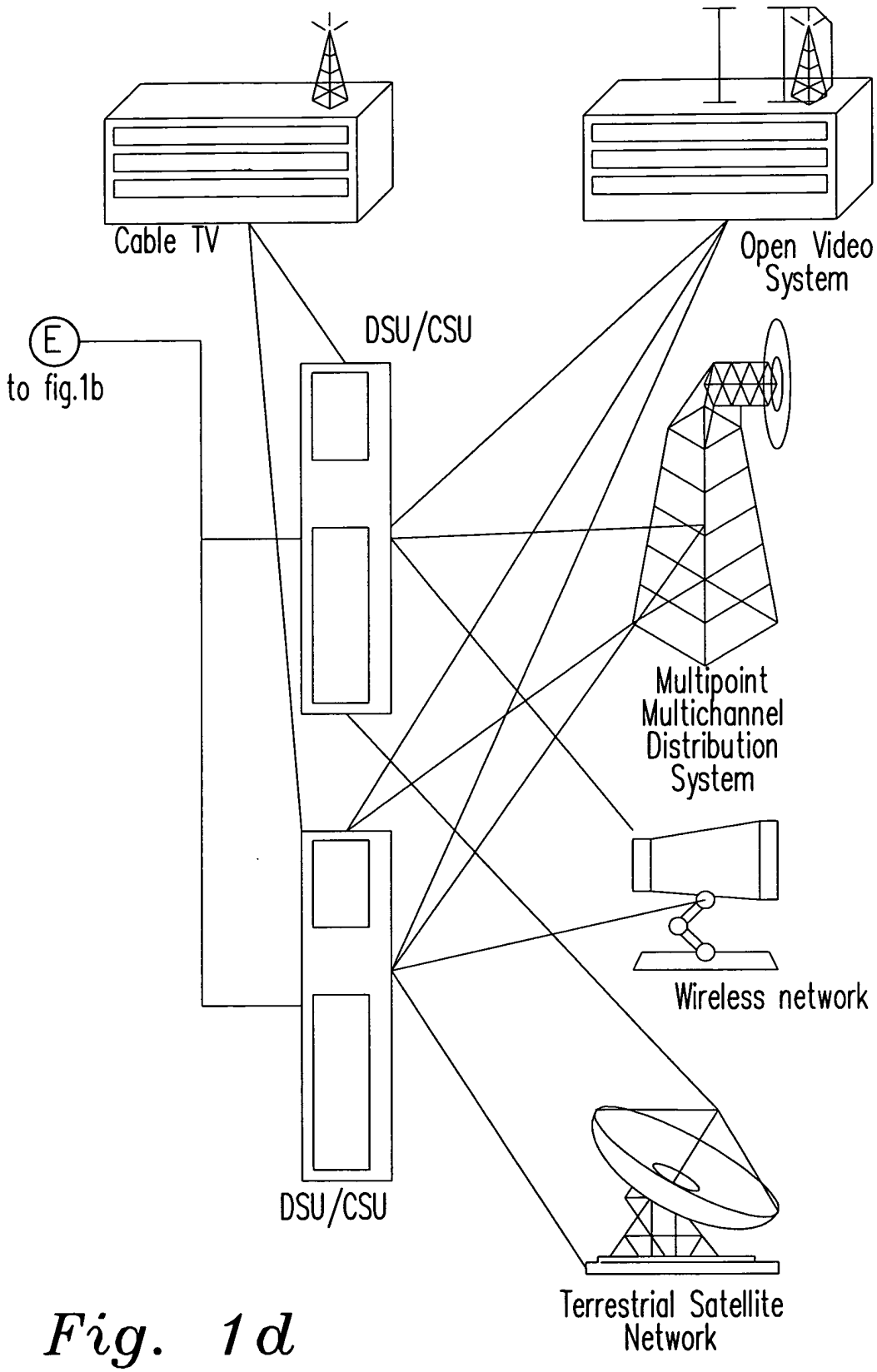

Cable TV
Open Video System
E
to fig.1b
DSU/CSU
Multipoint Multichannel Distribution System
Wireless network
DSU/CSU
Terrestrial Satellite Network

Fig. 1d

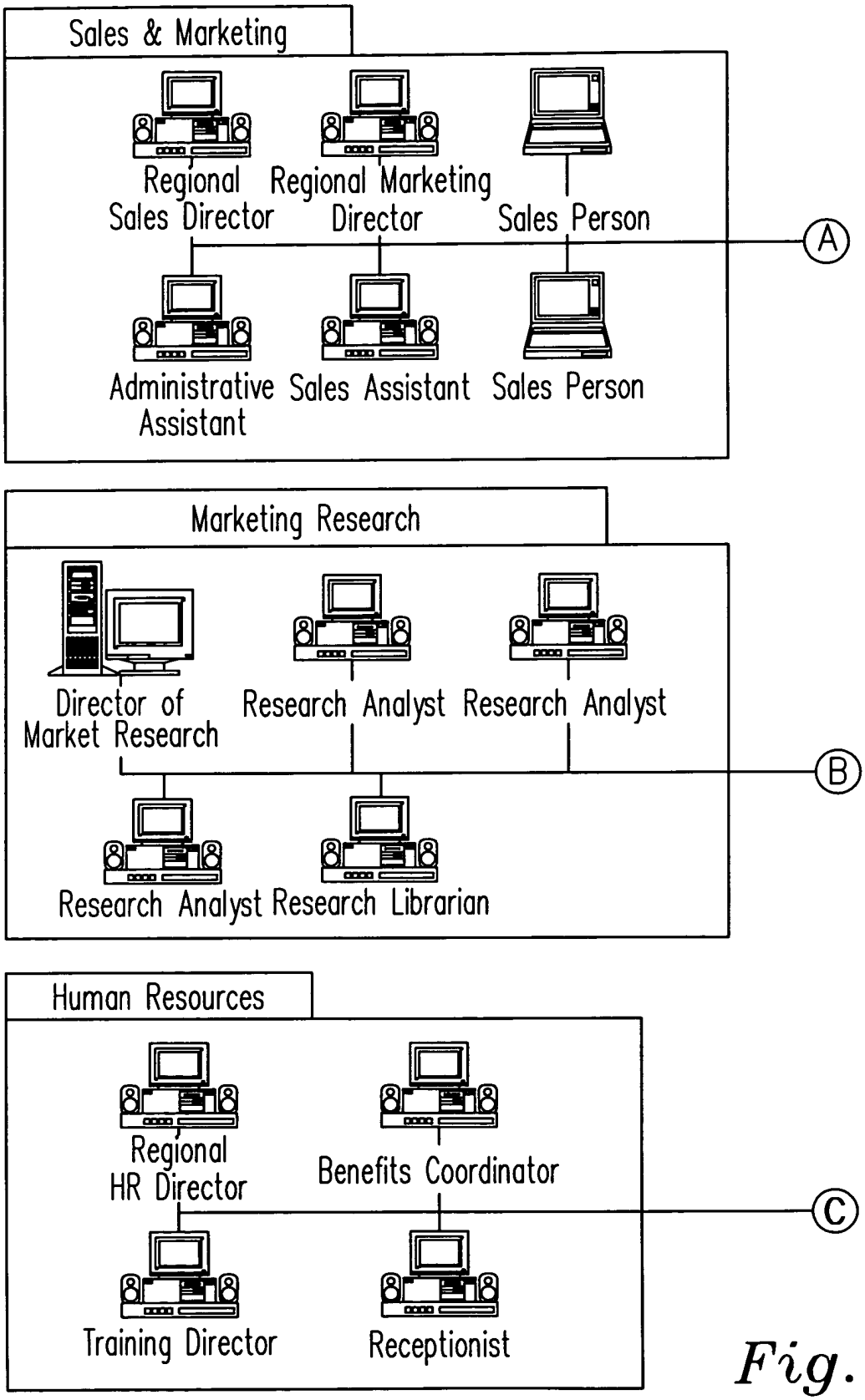

Sales & Marketing
Regional Sales Director
Regional Marketing Director
Sales Person
A
Administrative Assistant
Sales Assistant
Sales Person
Marketing Research
Director of Market Research
Research Analyst
Research Analyst
B
Research Analyst
Research Librarian
Human Resources
Regional HR Director
Benefits Coordinator
C
Training Director
Receptionist

Fig. 2a

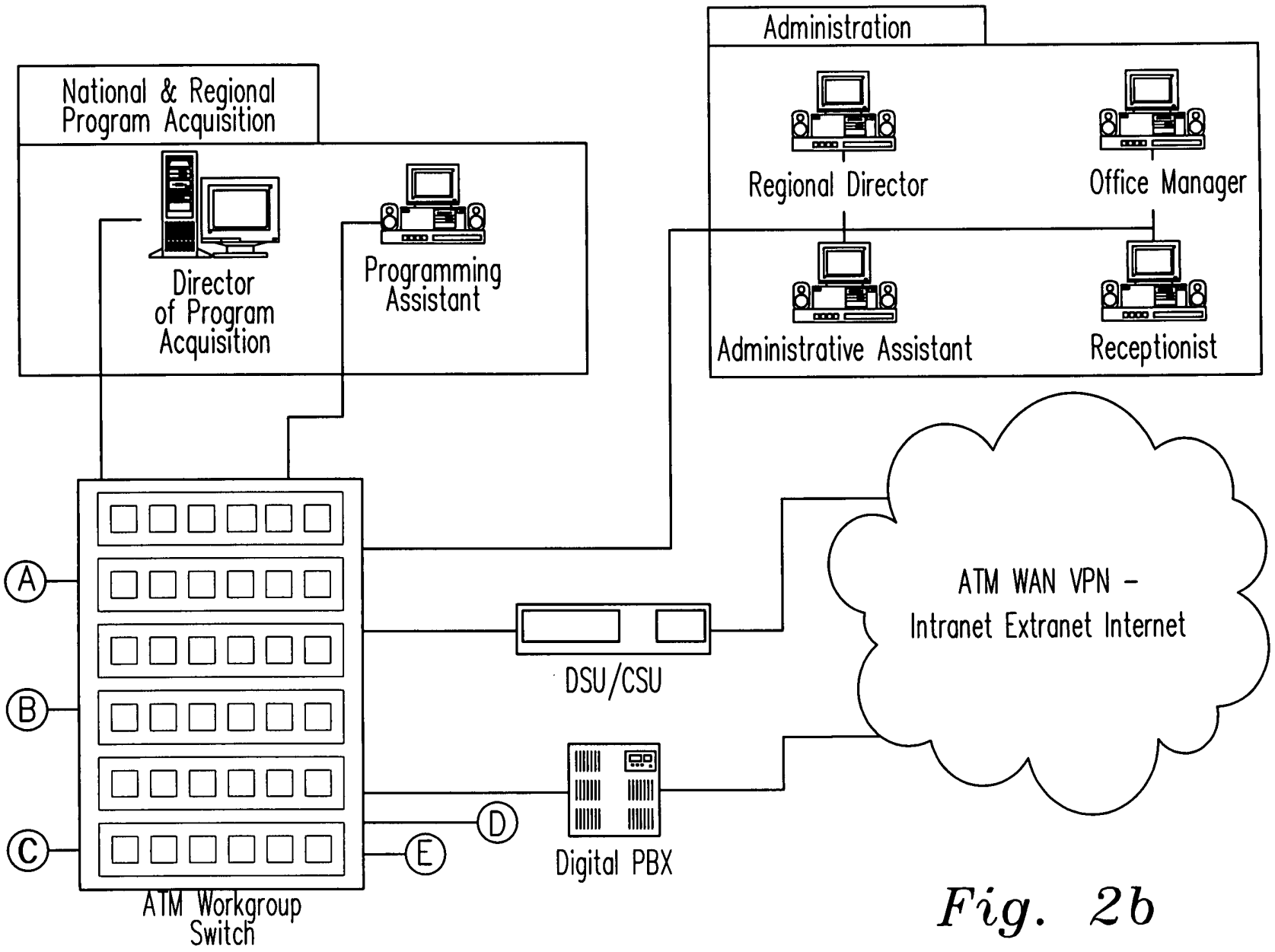

National & Regional Program Acquisition
Director of Program Acquisition
Programming Assistant
Administration
Regional Director
Office Manager
Administrative Assistant
Receptionist
ATM WAN VPN - Intranet Extranet Internet
DSU/CSU
Digital PBX
ATM Workgroup Switch
A
B
C
D
E

Fig. 2b

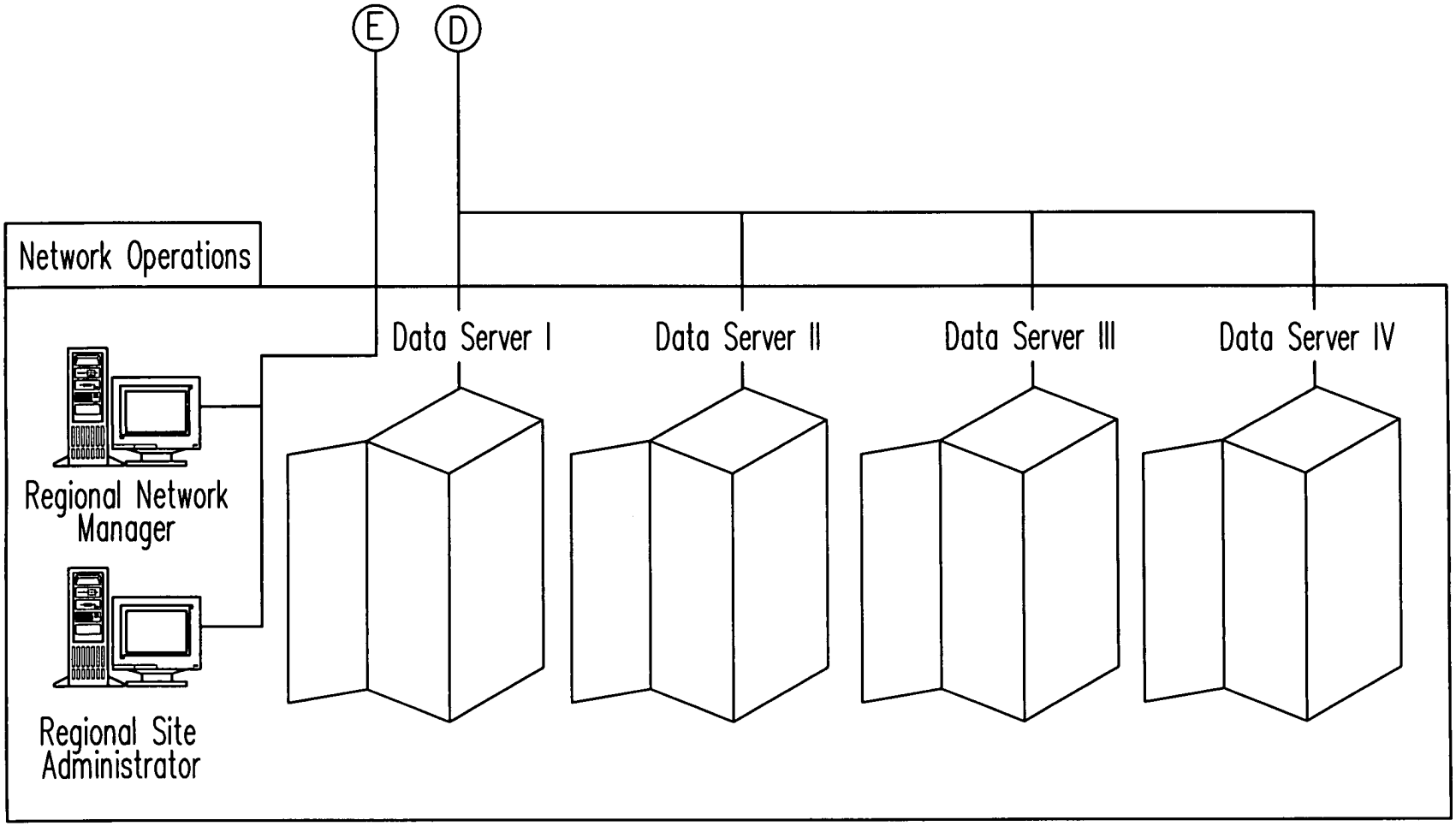
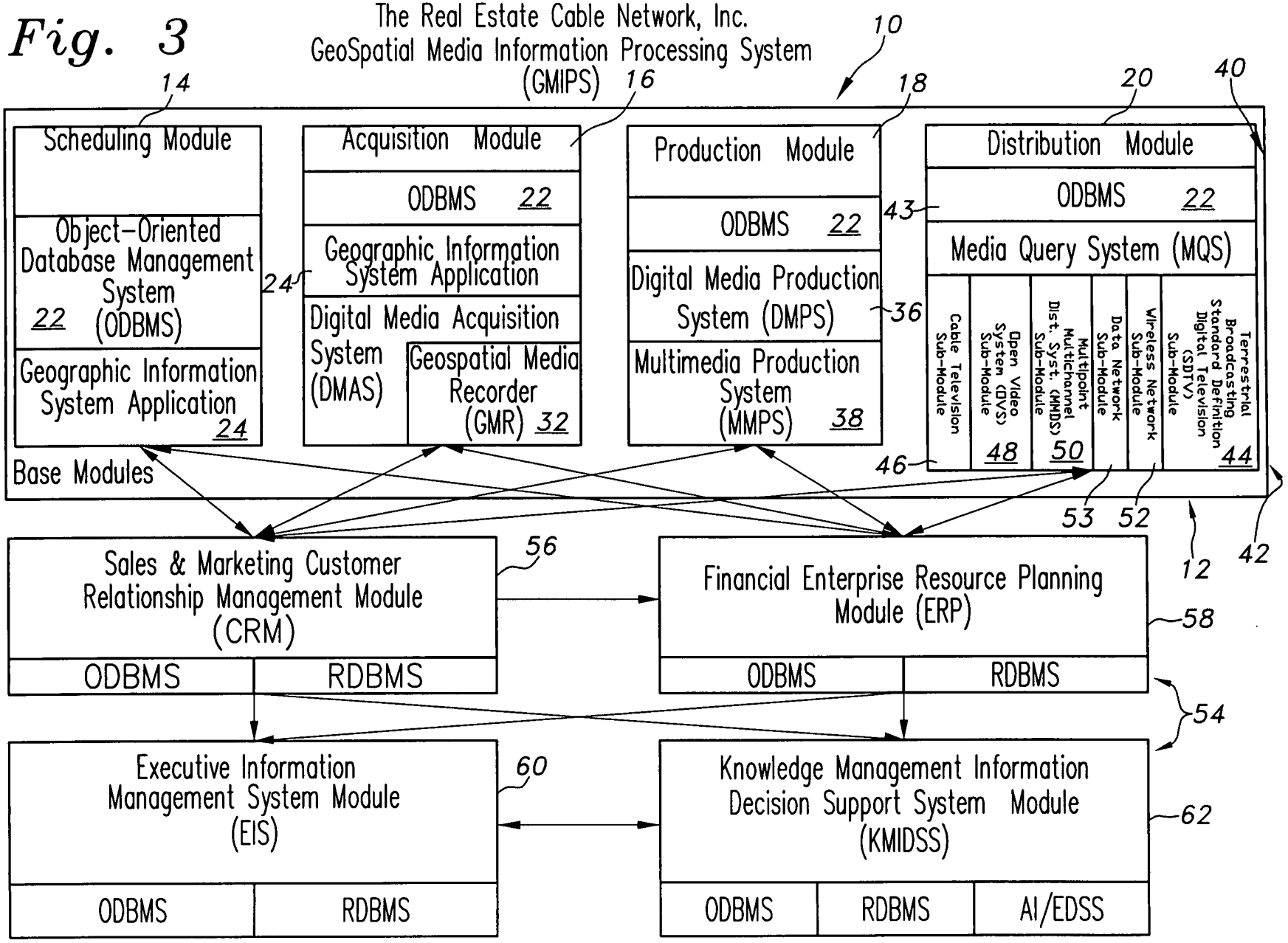

E
D
Network Operations
Data Server I
Data Server II
Data Server III
Data Server IV
Regional Network Manager
Regional Site Administrator

Fig. 2c

Fig. 3


The Real Estate Cable Network, Inc.
GeoSpatial Media Information Processing System
(GMIPS)
10
14
16
18
20
40
Scheduling Module
Object-Oriented Database Management System 22 (ODBMS)
Geographic Information System Application 24
24
Acquisition Module
ODBMS 22
Geographic Information System Application
Digital Media Acquisition System (DMAS)
Geospatial Media Recorder (GMR) 32
Production Module
ODBMS 22
Digital Media Production System (DMPS) 36
Multimedia Production System (MMPS) 38
43
Distribution Module
ODBMS 22
Media Query System (MQS)
Cable Television Sub-Module
Open Video System (OVS) Sub-Module 48
Multipoint Multichannel Dist. Syst. (MMDS) Sub-Module 50
Data Network Sub-Module
Wireless Network Sub-Module
Terrestrial Broadcasting Standard Definition Digital Television (SDTV) Sub-Module 44
46
Base Modules
53
52
12
42
Sales & Marketing Customer Relationship Management Module (CRM)
ODBMS
RDBMS
56
Financial Enterprise Resource Planning Module (ERP)
ODBMS
RDBMS
58
54
Executive Information Management System Module (EIS)
ODBMS
RDBMS
60
Knowledge Management Information Decision Support System Module (KMIDSS)
ODBMS
RDBMS
AI/EDSS
62

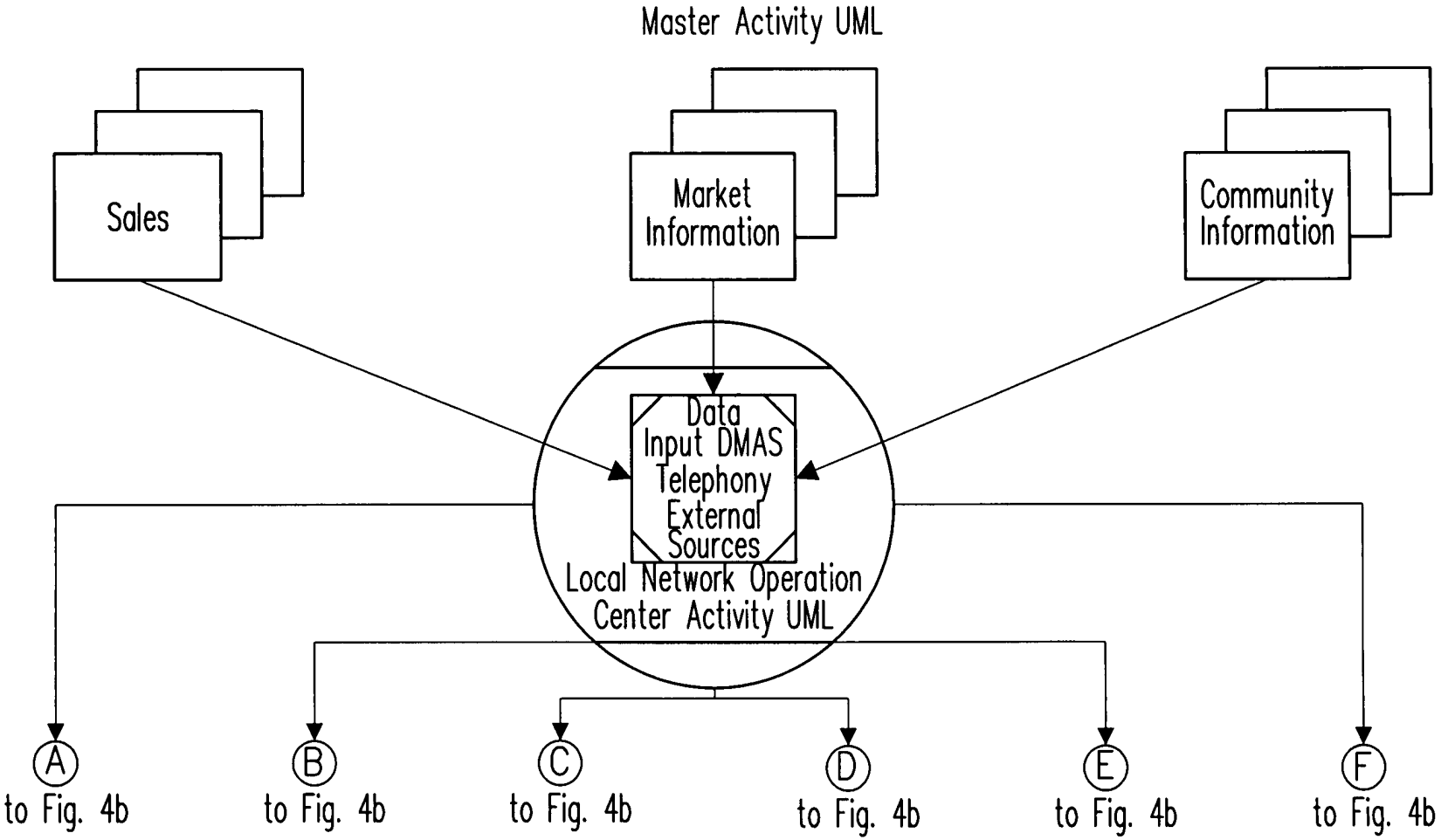

Master Activity UML
Sales
Market Information
Community Information
Data Input DMAS Telephony External Sources
Local Network Operation Center Activity UML
A
to Fig. 4b
B
to Fig. 4b
C
to Fig. 4b
D
to Fig. 4b
E
to Fig. 4b
F
to Fig. 4b

Fig. 4a

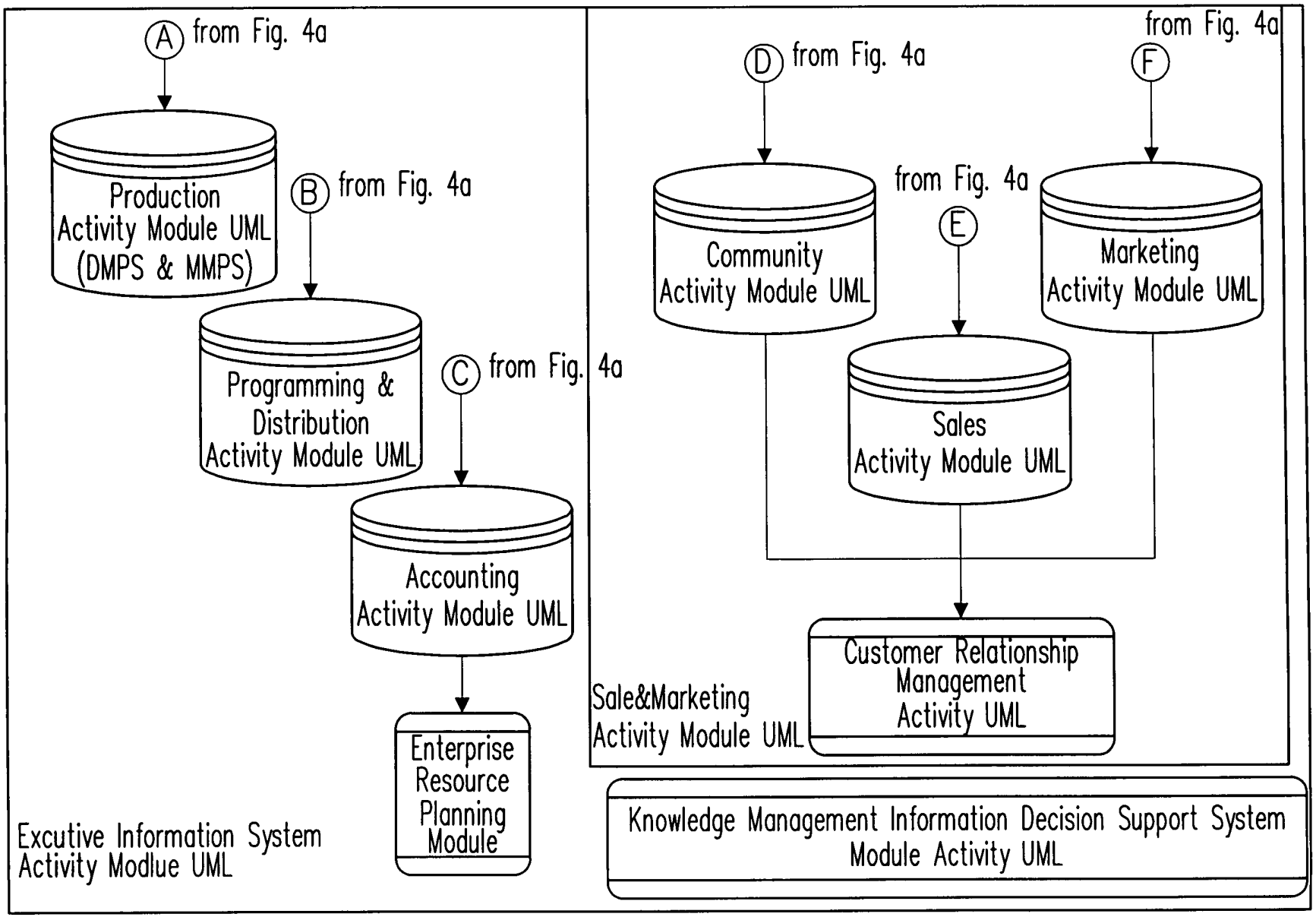

A from Fig. 4a
Production Activity Module UML (DMPS & MMPS)
B from Fig. 4a
Programming & Distribution Activity Module UML
C from Fig. 4a
Accounting Activity Module UML
Enterprise Resource Planning Module
Excutive Information System Activity Modlue UML
D from Fig. 4a
Community Activity Module UML
from Fig. 4a
E
Sales Activity Module UML
from Fig. 4a
F
Marketing Activity Module UML
Customer Relationship Management Activity UML
Sale&Marketing Activity Module UML
Knowledge Management Information Decision Support System Module Activity UML

Fig. 4b

Scheduling Module

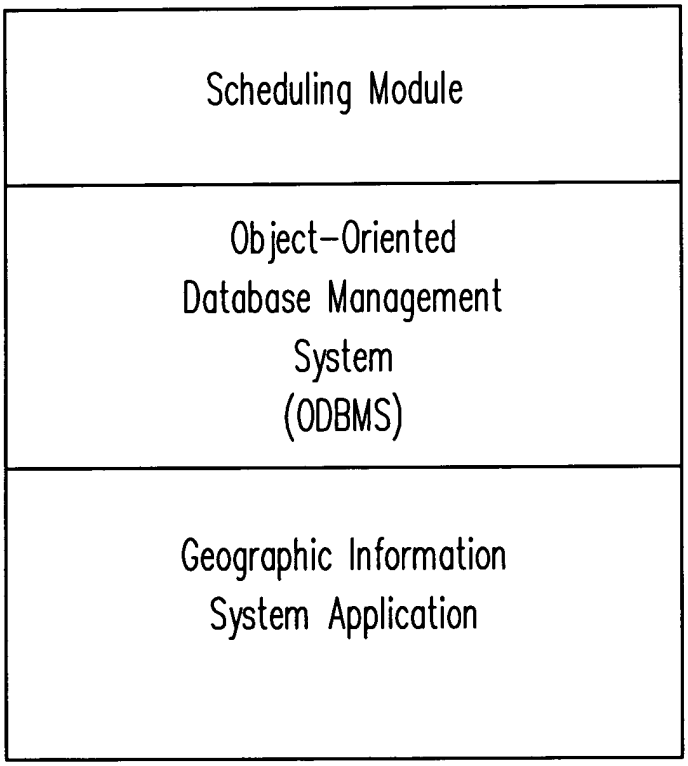


Fig. 5

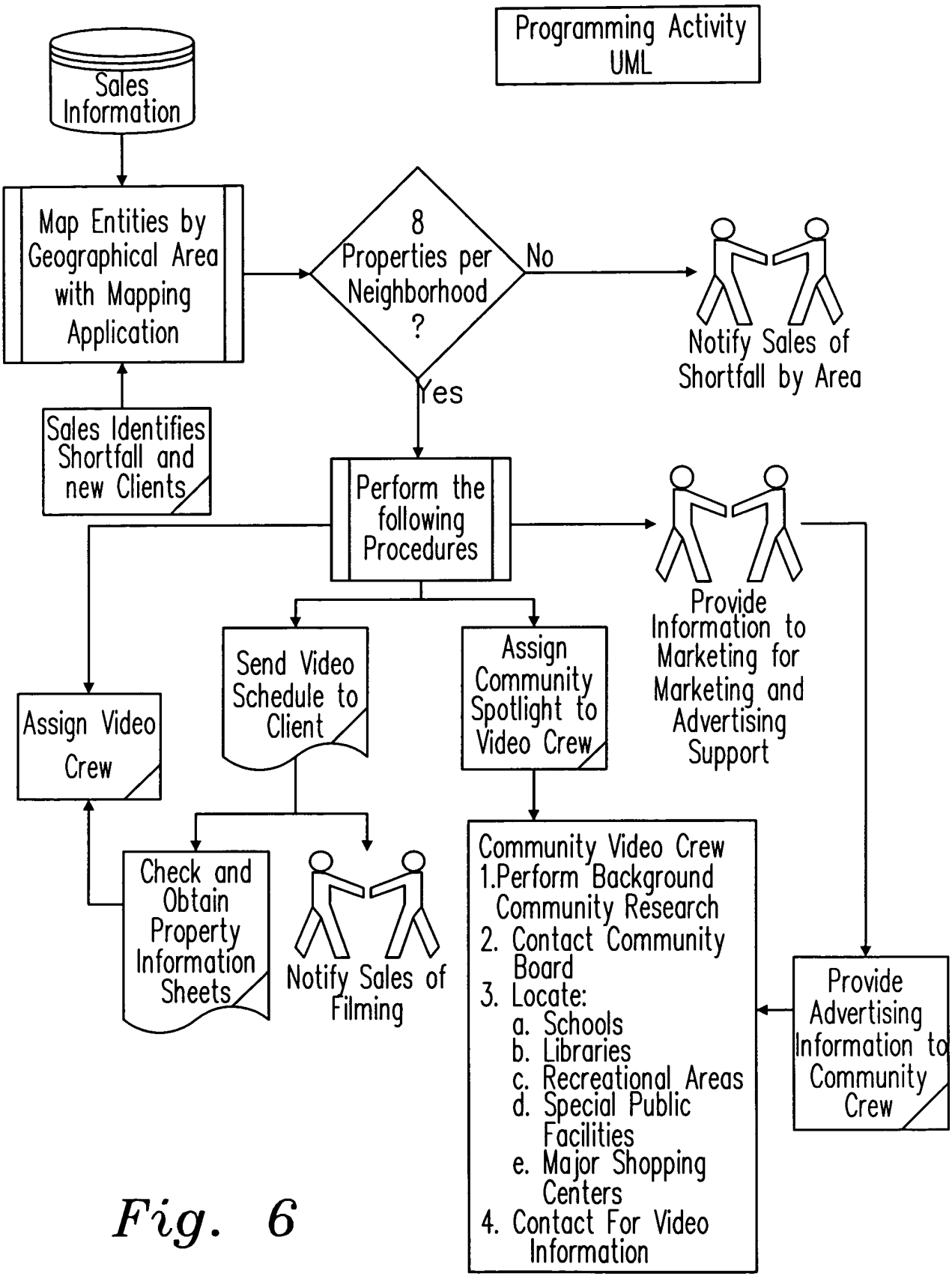

Programming Activity UML
Sales Information
Map Entities by Geographical Area with Mapping Application
8 Properties per Neighborhood ?
No
Notify Sales of Shortfall by Area
Yes
Sales Identifies Shortfall and new Clients
Perform the following Procedures
Provide Information to Marketing for Marketing and Advertising Support
Assign Video Crew
Send Video Schedule to Client
Assign Community Spotlight to Video Crew
Check and Obtain Property Information Sheets
Notify Sales of Filming
Community Video Crew
1.Perform Background Community Research
2. Contact Community Board
3. Locate:
a. Schools
b. Libraries
c. Recreational Areas
d. Special Public Facilities
e. Major Shopping Centers
4. Contact For Video Information
Provide Advertising Information to Community Crew

Fig. 6

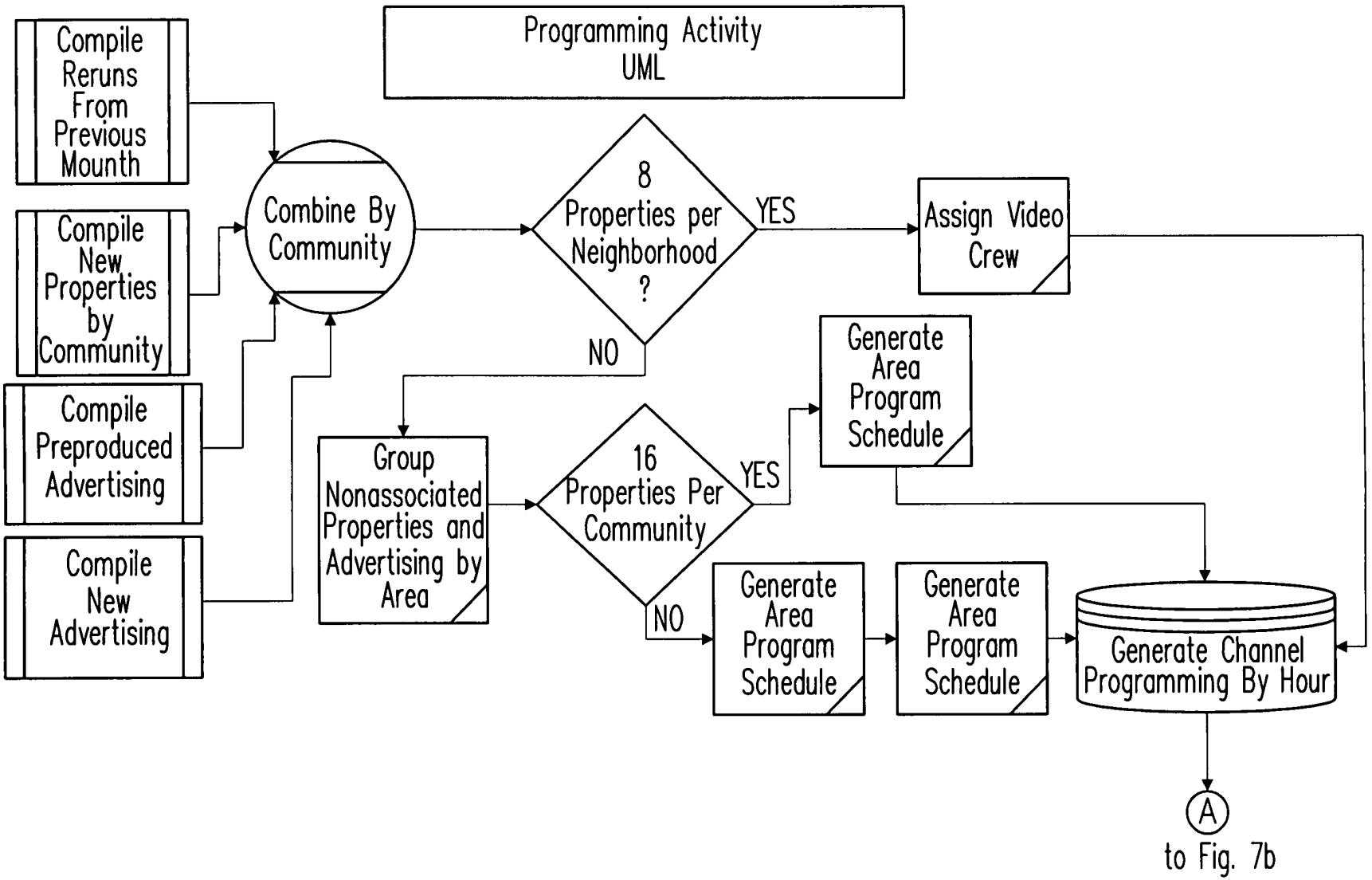

Programming Activity
UML
Compile Reruns From Previous Mounth
Compile New Properties by Community
Compile Preproduced Advertising
Compile New Advertising
Combine By Community
8 Properties per Neighborhood ?
YES
NO
Assign Video Crew
Group Nonassociated Properties and Advertising by Area
16 Properties Per Community
YES
NO
Generate Area Program Schedule
Generate Area Program Schedule
Generate Area Program Schedule
Generate Channel Programming By Hour
A
to Fig. 7b

Fig. 7a

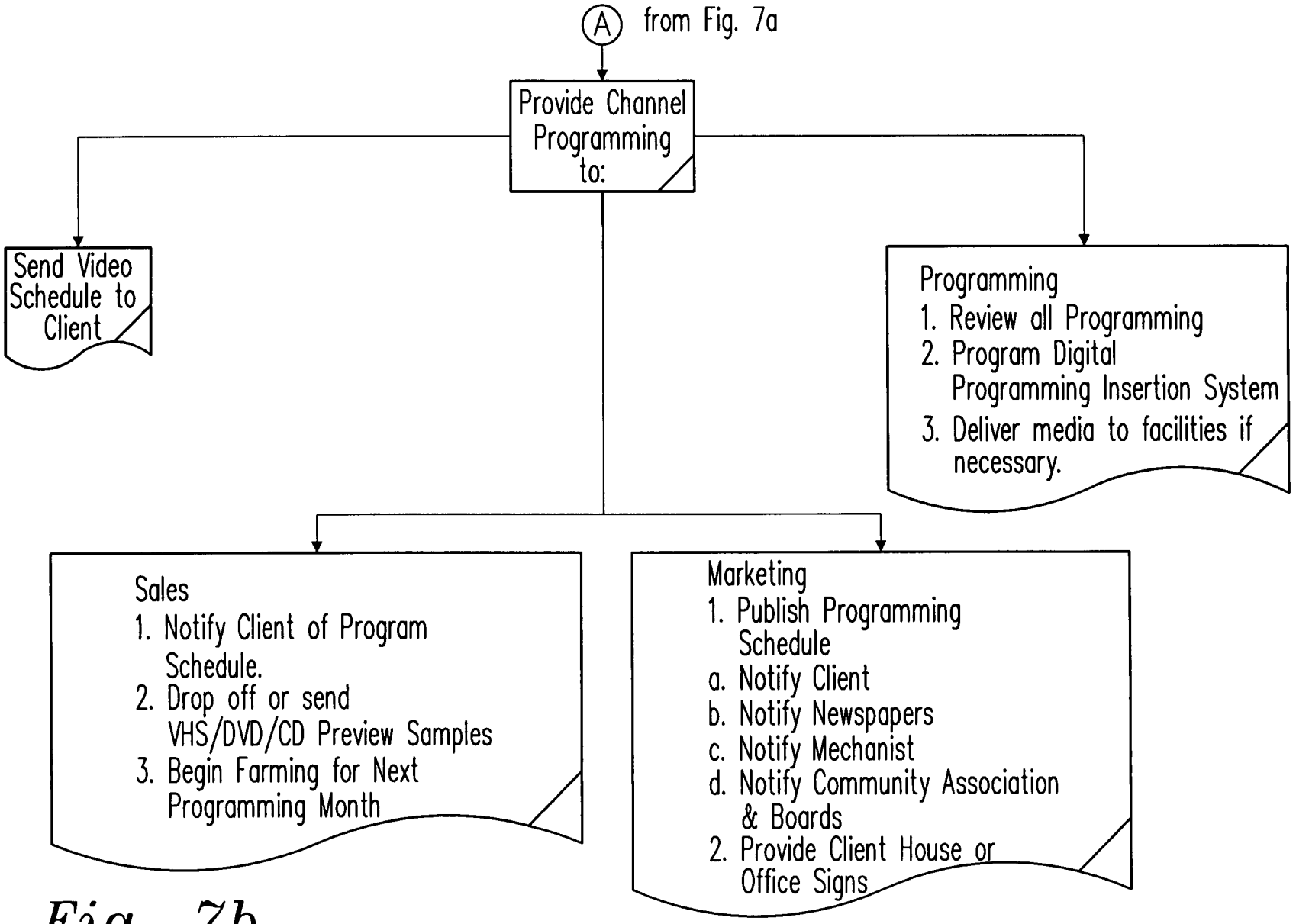

A
from Fig. 7a
Provide Channel Programming to:
Send Video Schedule to Client
Programming
1. Review all Programming
2. Program Digital Programming Insertion System
3. Deliver media to facilities if necessary.
Sales
1. Notify Client of Program Schedule.
2. Drop off or send VHS/DVD/CD Preview Samples
3. Begin Farming for Next Programming Month
Marketing
1. Publish Programming Schedule
a. Notify Client
b. Notify Newspapers
c. Notify Mechanist
d. Notify Community Association & Boards
2. Provide Client House or Office Signs

Fig. 7b

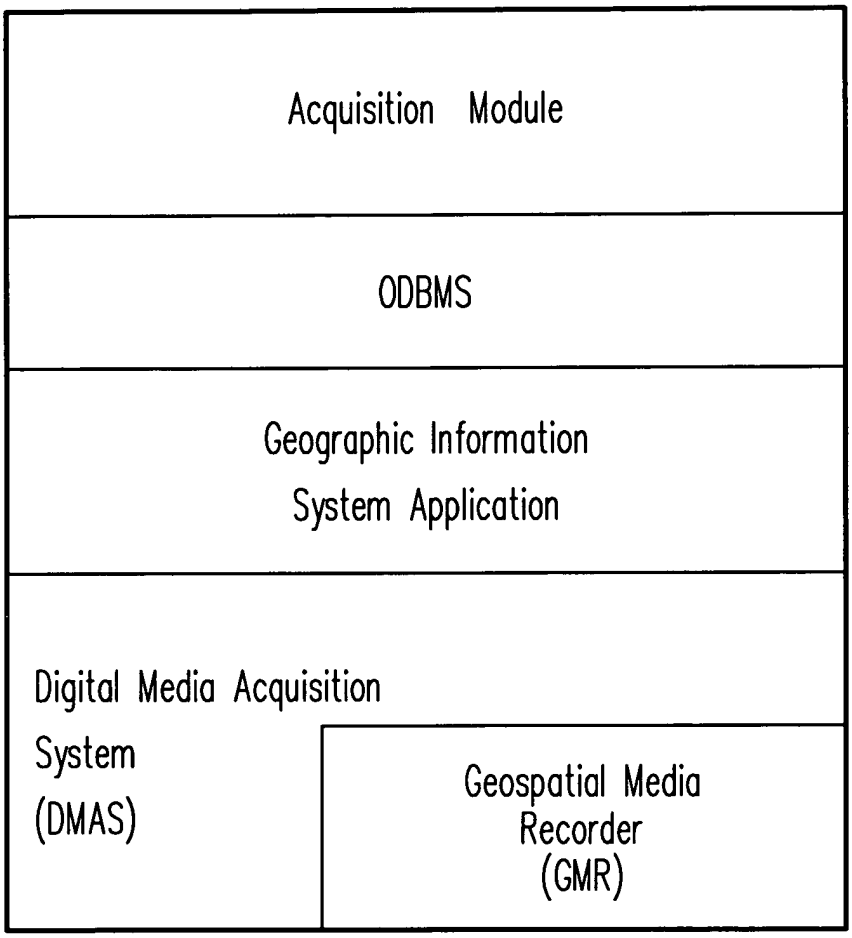

Acquisition Module
ODBMS
Geographic Information System Application
Digital Media Acquisition System (DMAS)
Geospatial Media Recorder (GMR)

Fig. 8

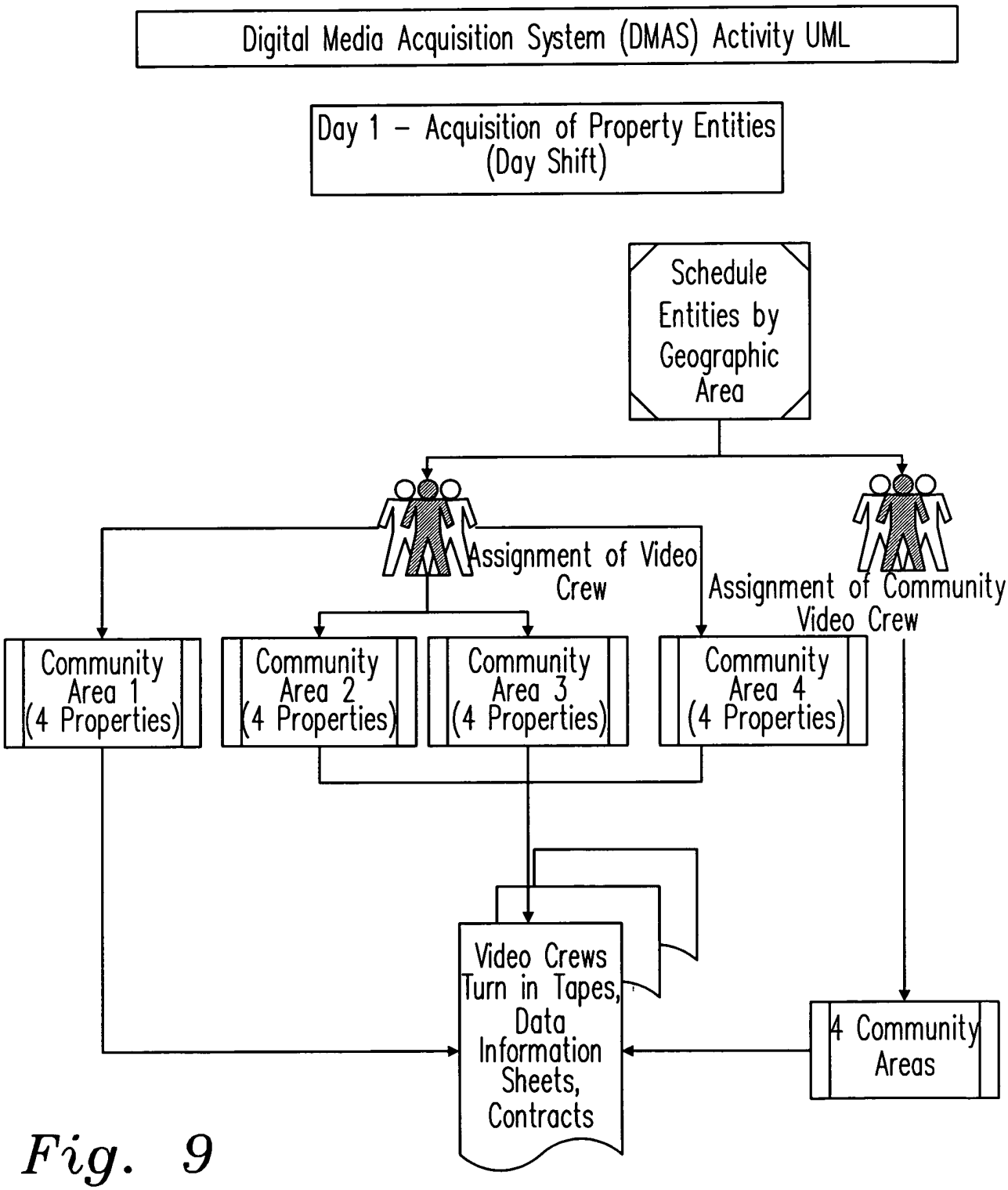

Digital Media Acquisition System (DMAS) Activity UML
Day 1 – Acquisition of Property Entities (Day Shift)
Schedule Entities by Geographic Area
Assignment of Video Crew
Assignment of Community Video Crew
Community Area 1 (4 Properties)
Community Area 2 (4 Properties)
Community Area 3 (4 Properties)
Community Area 4 (4 Properties)
Video Crews Turn in Tapes, Data Information Sheets, Contracts
4 Community Areas

Fig. 9

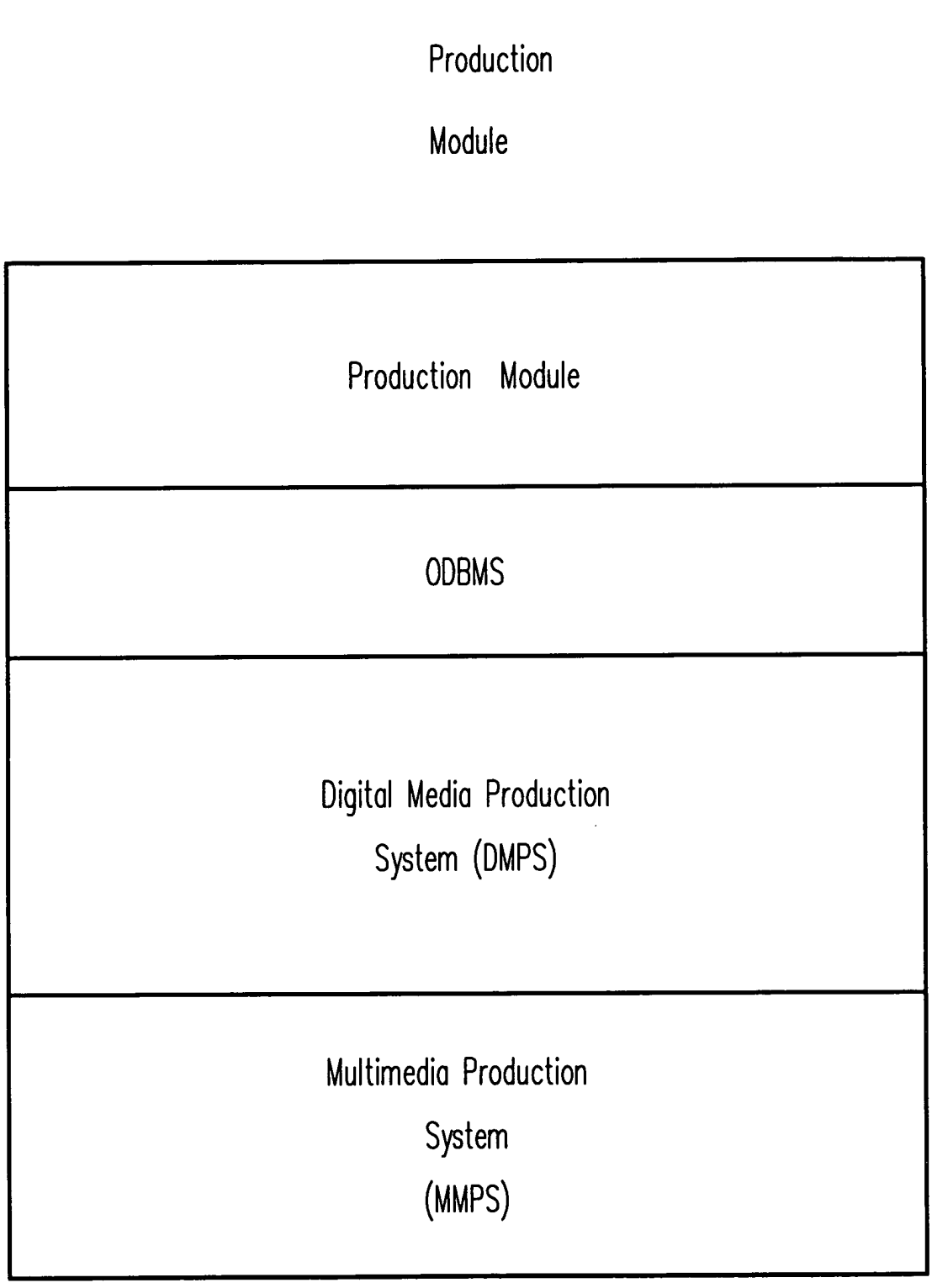

Production
Module
Production Module
ODBMS
Digital Media Production
System (DMPS)
Multimedia Production
System
(MMPS)

Fig. 10

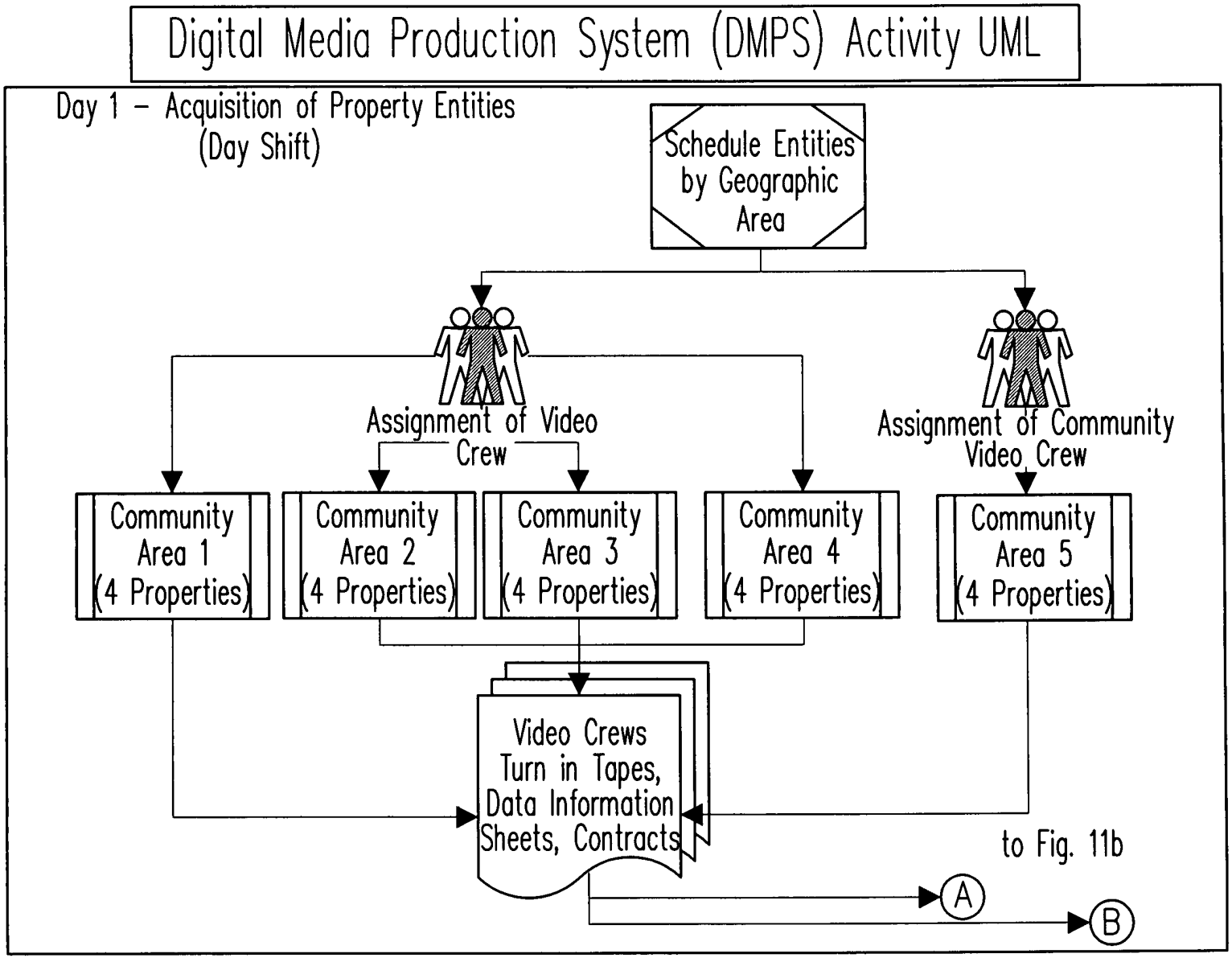

Digital Media Production System (DMPS) Activity UML
Day 1 – Acquisition of Property Entities
(Day Shift)
Schedule Entities by Geographic Area
Assignment of Video Crew
Assignment of Community Video Crew
Community Area 1 (4 Properties)
Community Area 2 (4 Properties)
Community Area 3 (4 Properties)
Community Area 4 (4 Properties)
Community Area 5 (4 Properties)
Video Crews Turn in Tapes, Data Information Sheets, Contracts
to Fig. 11b
A
B

Fig. 11a

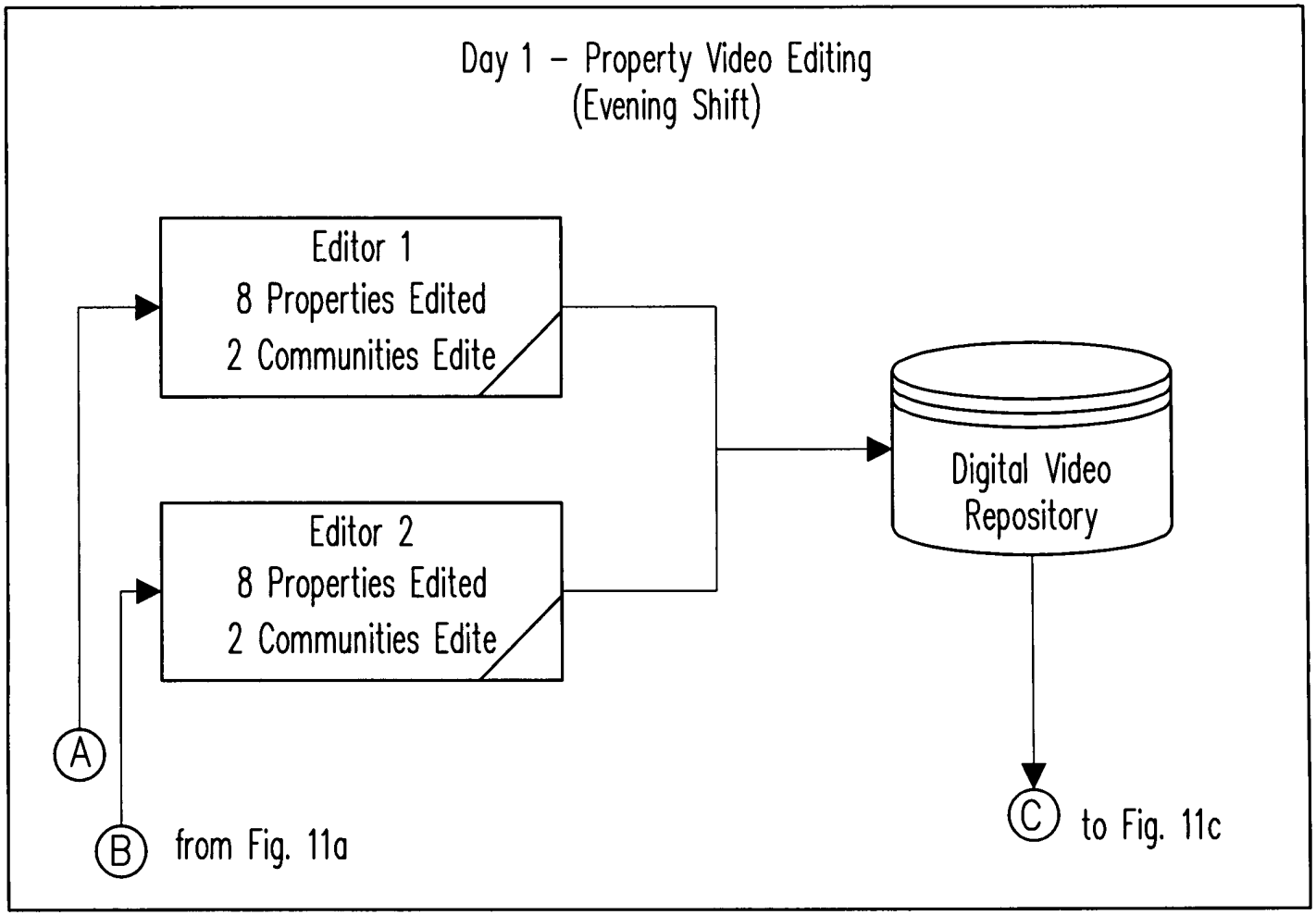

Day 1 – Property Video Editing
(Evening Shift)
Editor 1
8 Properties Edited
2 Communities Edite
Editor 2
8 Properties Edited
2 Communities Edite
Digital Video
Repository
A
B
from Fig. 11a
C
to Fig. 11c

Fig. 11b

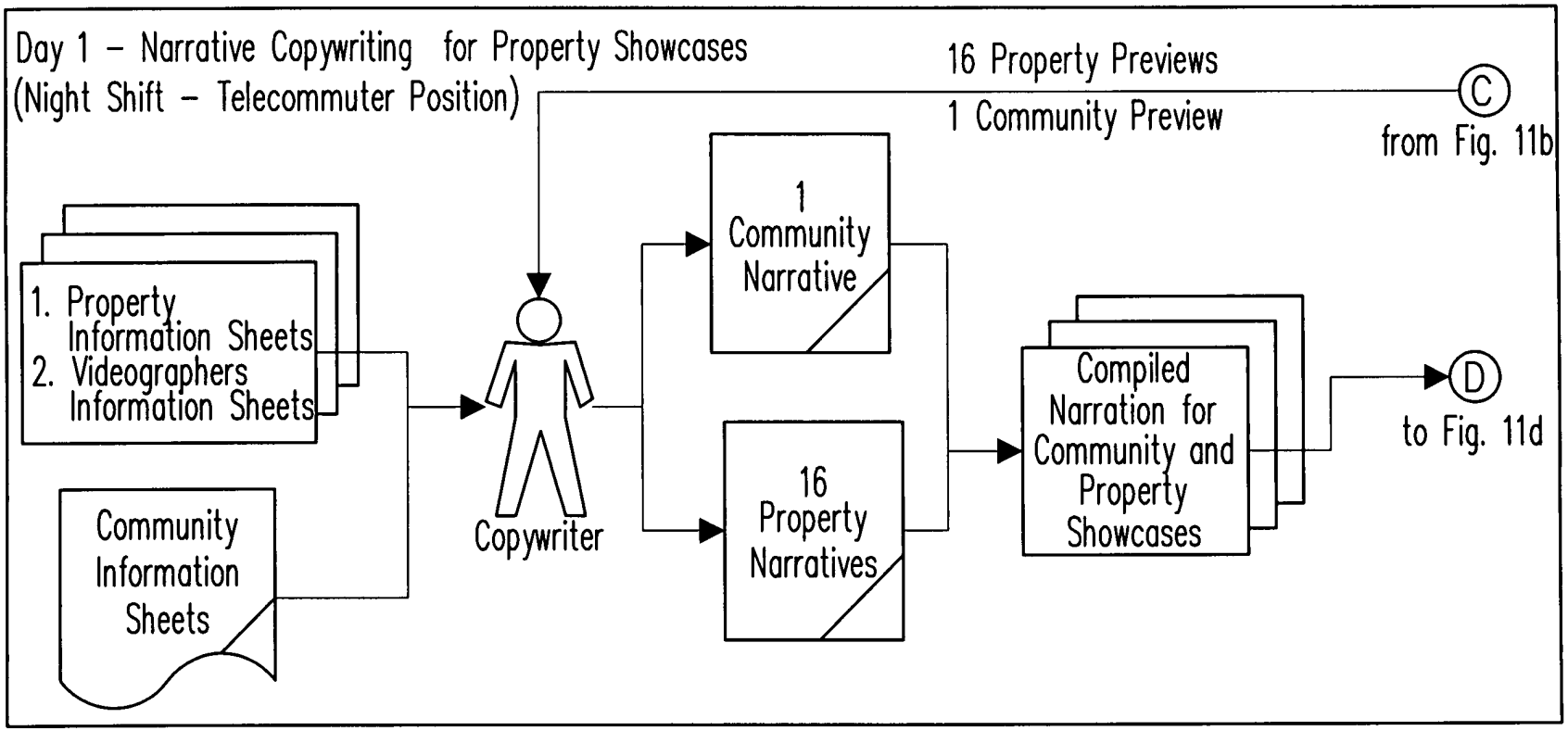

Day 1 – Narrative Copywriting for Property Showcases
(Night Shift – Telecommuter Position)
16 Property Previews
1 Community Preview
C
from Fig. 11b
1. Property Information Sheets
2. Videographers Information Sheets
Community Information Sheets
Copywriter
1 Community Narrative
16 Property Narratives
Compiled Narration for Community and Property Showcases
D
to Fig. 11d

Fig. 11c

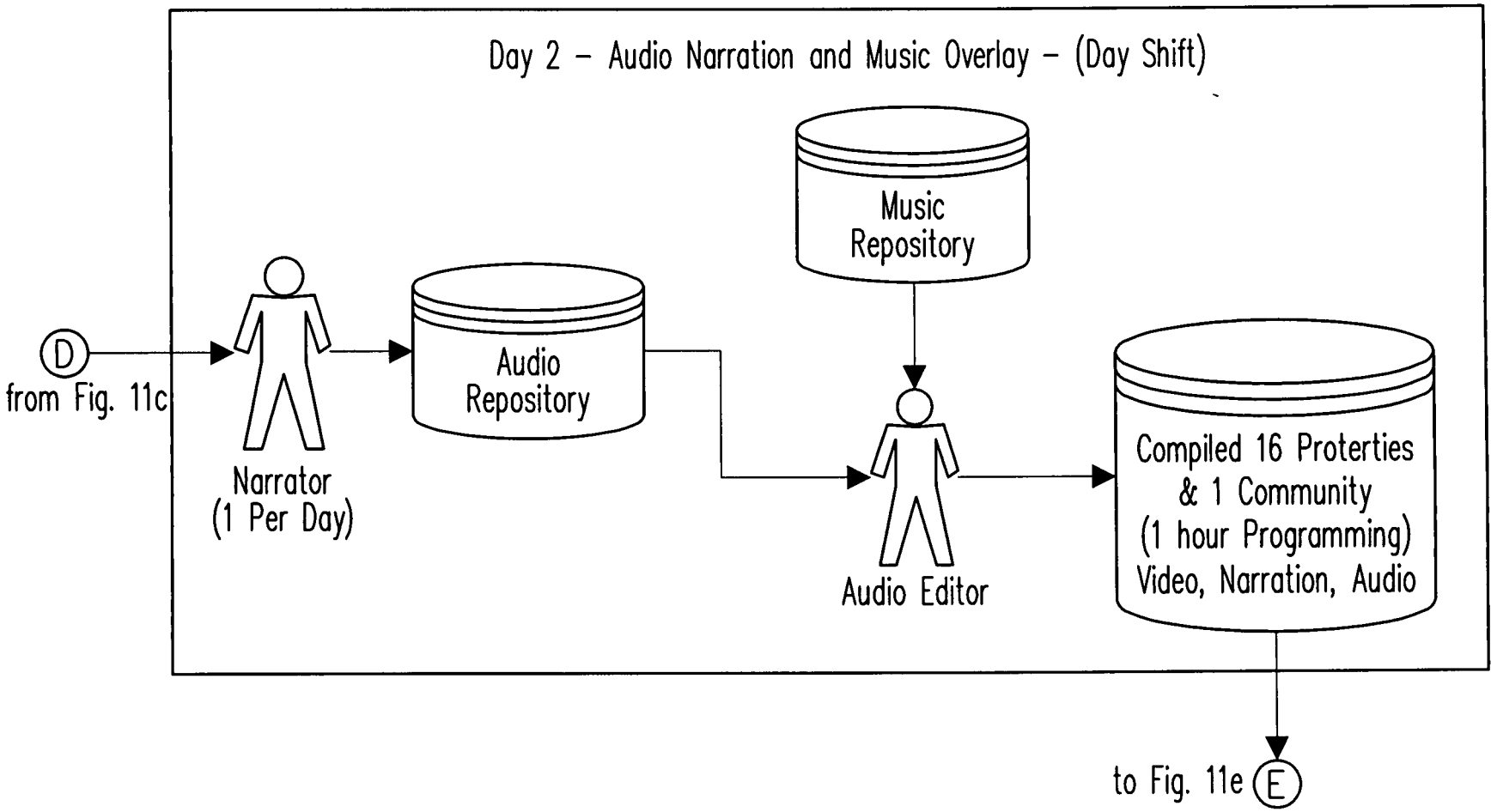

Day 2 – Audio Narration and Music Overlay – (Day Shift)
Music Repository
D
from Fig. 11c
Narrator (1 Per Day)
Audio Repository
Audio Editor
Compiled 16 Proterties & 1 Community (1 hour Programming) Video, Narration, Audio
to Fig. 11e
E

Fig. 11d

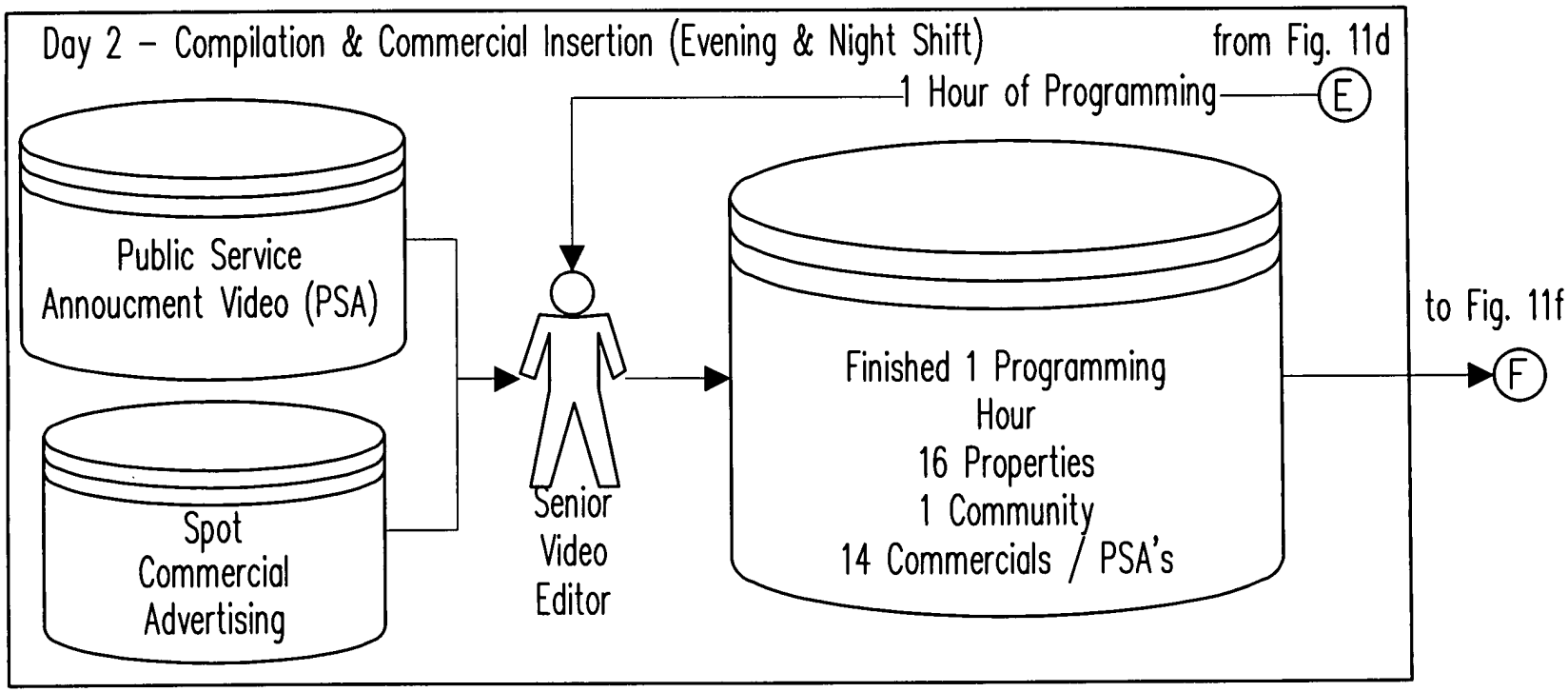

Day 2 – Compilation & Commercial Insertion (Evening & Night Shift)
from Fig. 11d
1 Hour of Programming
E
Public Service Annoucment Video (PSA)
Spot Commercial Advertising
Senior Video Editor
Finished 1 Programming Hour
16 Properties
1 Community
14 Commercials / PSA's
to Fig. 11f
F

Fig. 11e

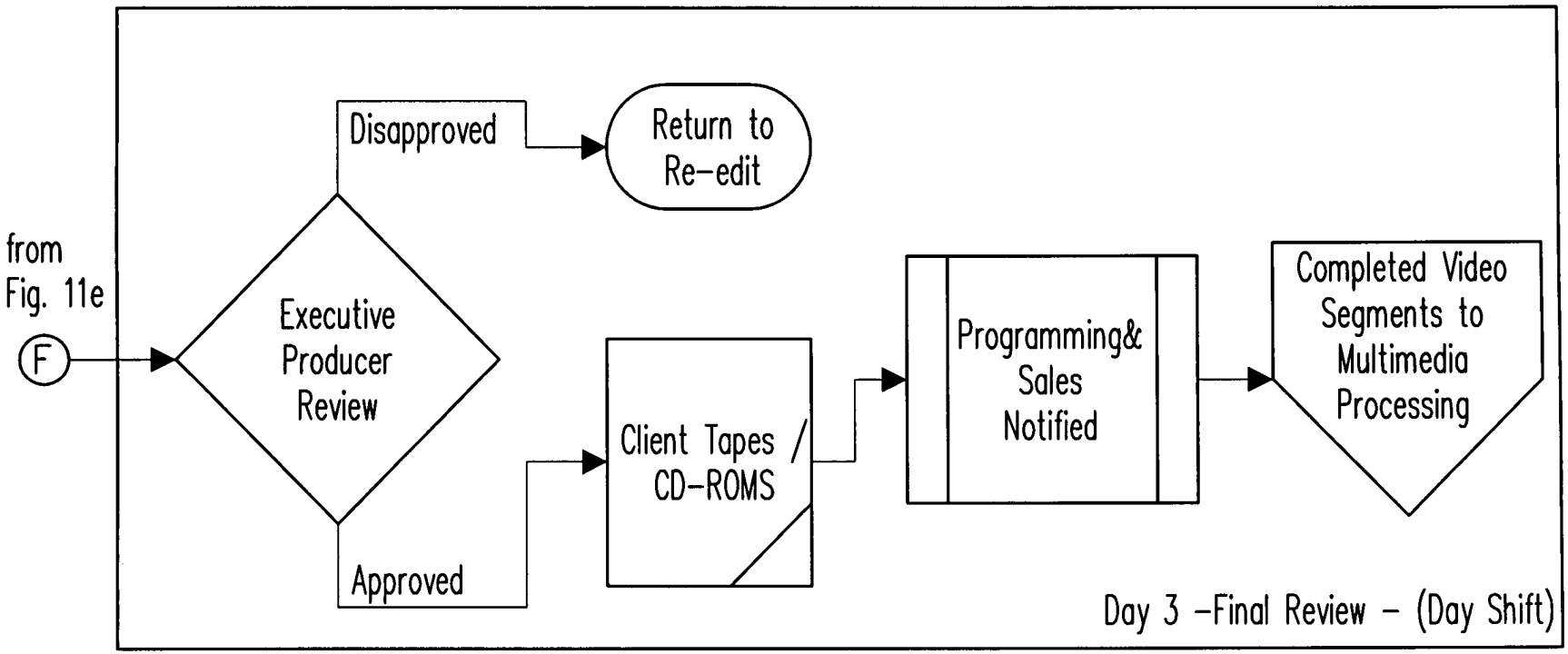
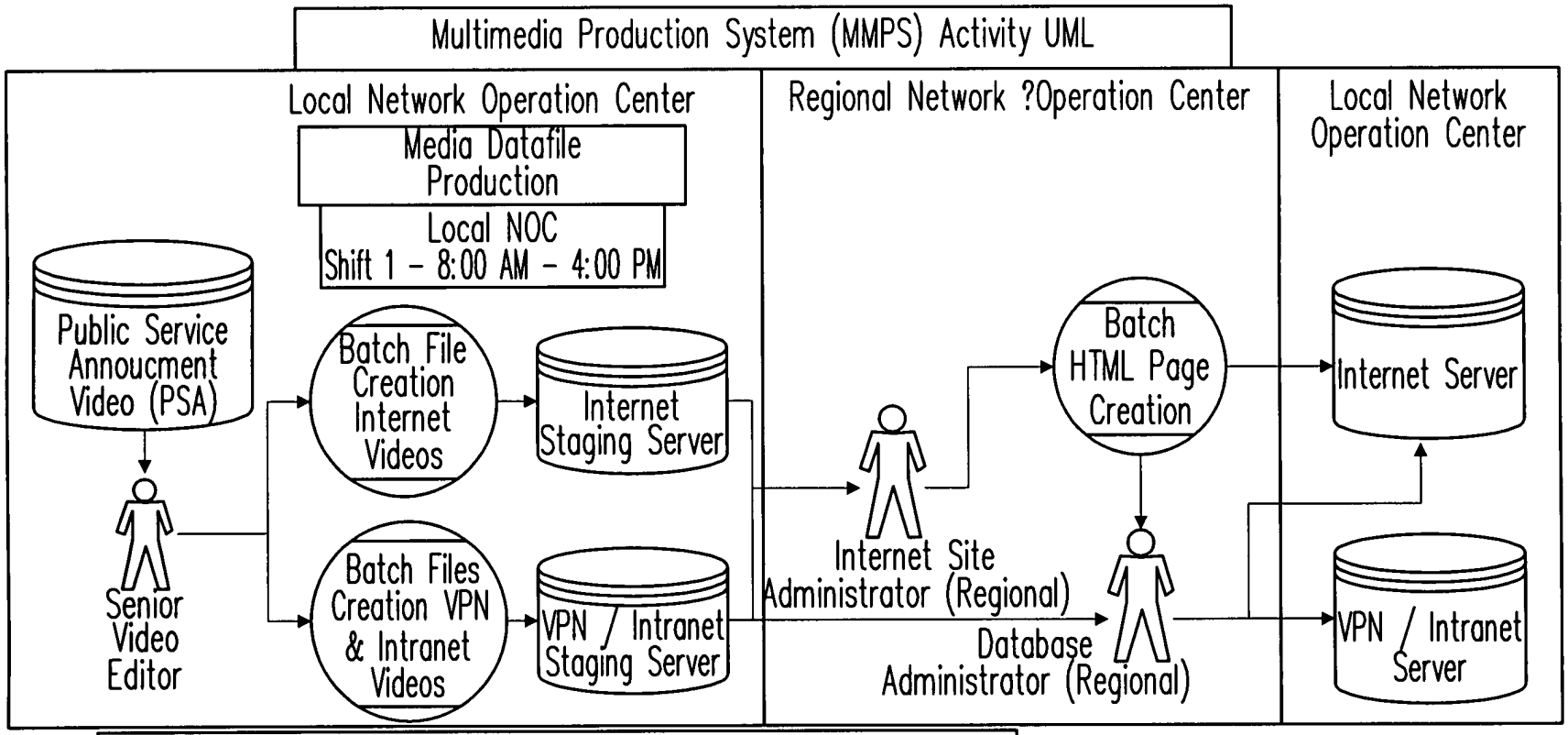

from
Fig. 11e
F
Executive
Producer
Review
Disapproved
Return to
Re-edit
Approved
Client Tapes /
CD-ROMS
Programming&
Sales
Notified
Completed Video
Segments to
Multimedia
Processing
Day 3 -Final Review - (Day Shift)

Fig. 11f



Digital Multimedia Creation

1. Batch Process datafile creation
   - MPEG-2
   - MPEG-1
   - NetShow
   - Real Video
   - Quicktime
2. Create GIF Cover Files
3. Batch Upload to Internet Staging Server
4. Batch upload to VPN Server
5. Batch upload MPEG-2 to Cable / OVS/ MMDS/ Broadcasting Server

Fig. 12

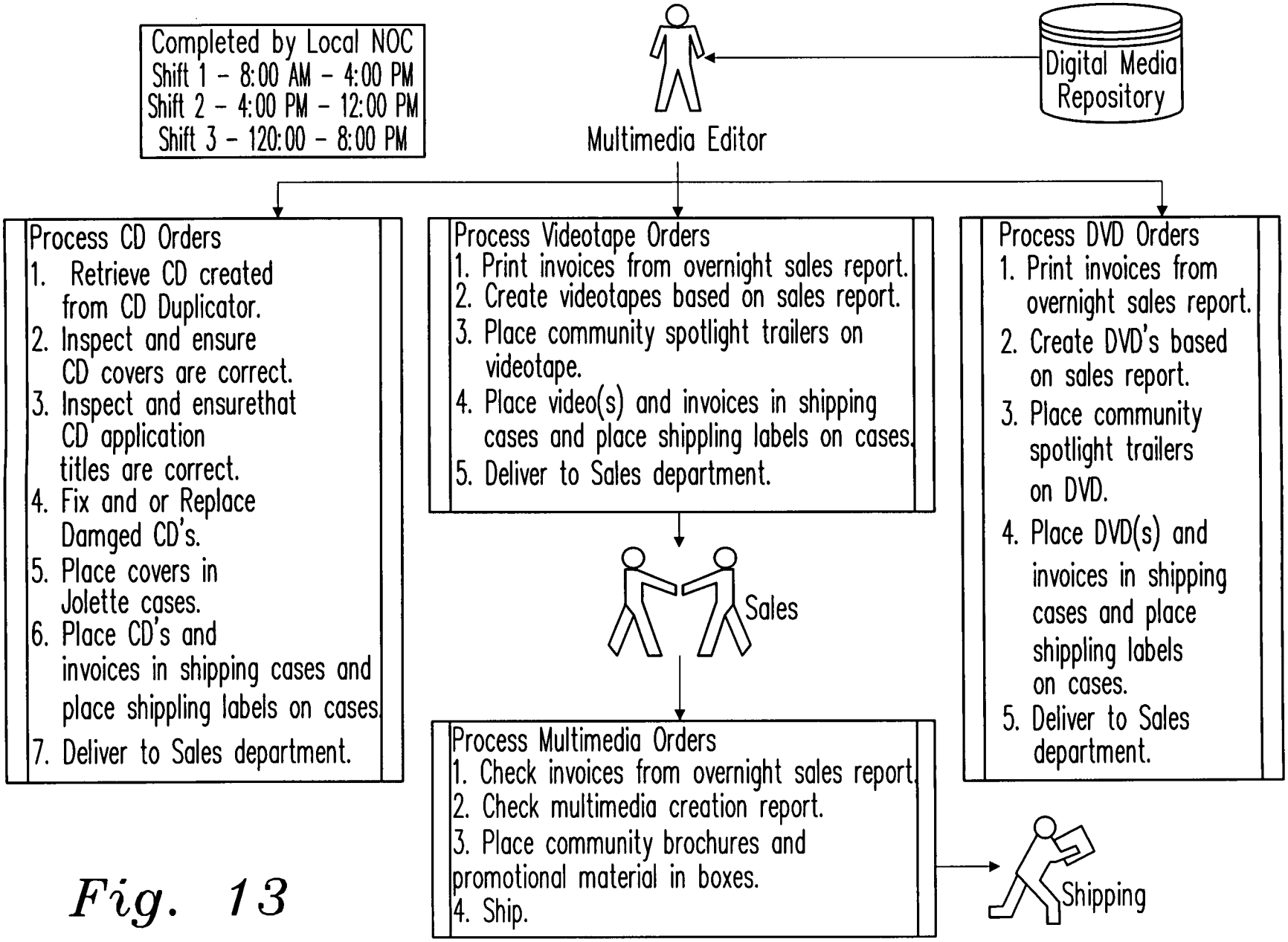

Completed by Local NOC
Shift 1 - 8:00 AM - 4:00 PM
Shift 2 - 4:00 PM - 12:00 PM
Shift 3 - 120:00 - 8:00 PM
Multimedia Editor
Digital Media Repository
Process CD Orders
1. Retrieve CD created from CD Duplicator.
2. Inspect and ensure CD covers are correct.
3. Inspect and ensurethat CD application titles are correct.
4. Fix and or Replace Damged CD's.
5. Place covers in Jolette cases.
6. Place CD's and invoices in shipping cases and place shippling labels on cases.
7. Deliver to Sales department.
Process Videotape Orders
1. Print invoices from overnight sales report.
2. Create videotapes based on sales report.
3. Place community spotlight trailers on videotape.
4. Place video(s) and invoices in shipping cases and place shippling labels on cases.
5. Deliver to Sales department.
Process DVD Orders
1. Print invoices from overnight sales report.
2. Create DVD's based on sales report.
3. Place community spotlight trailers on DVD.
4. Place DVD(s) and invoices in shipping cases and place shippling labels on cases.
5. Deliver to Sales department.
Sales
Process Multimedia Orders
1. Check invoices from overnight sales report.
2. Check multimedia creation report.
3. Place community brochures and promotional material in boxes.
4. Ship.
Shipping

Fig. 13

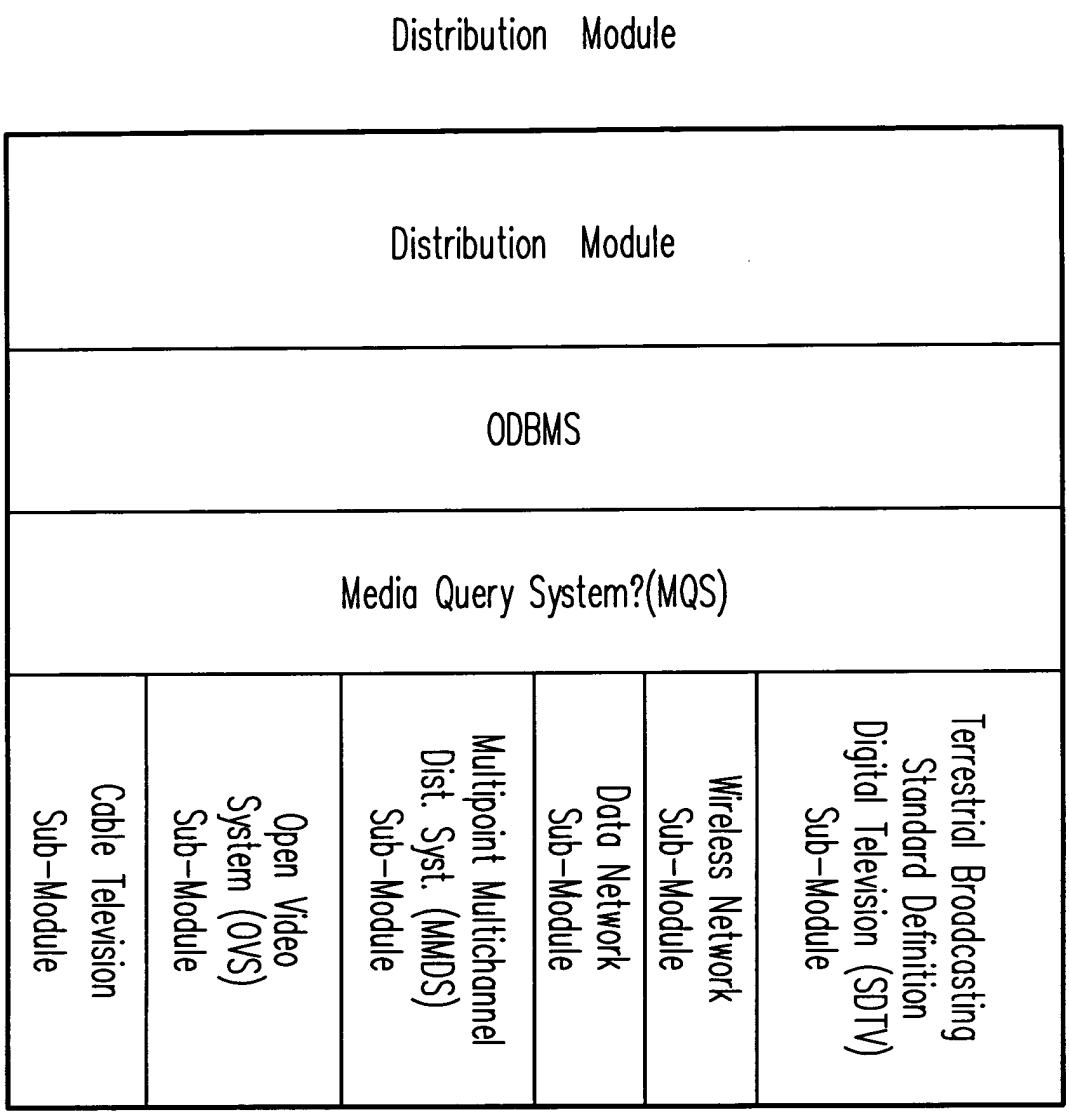

Distribution Module
Distribution Module
ODBMS
Media Query System?(MQS)
Terrestrial Broadcasting Standard Definition Digital Television (SDTV) Sub-Module
Wireless Network Sub-Module
Data Network Sub-Module
Multipoint Multichannel Dist. Syst. (MMDS) Sub-Module
Open Video System (OVS) Sub-Module
Cable Television Sub-Module

Fig. 14

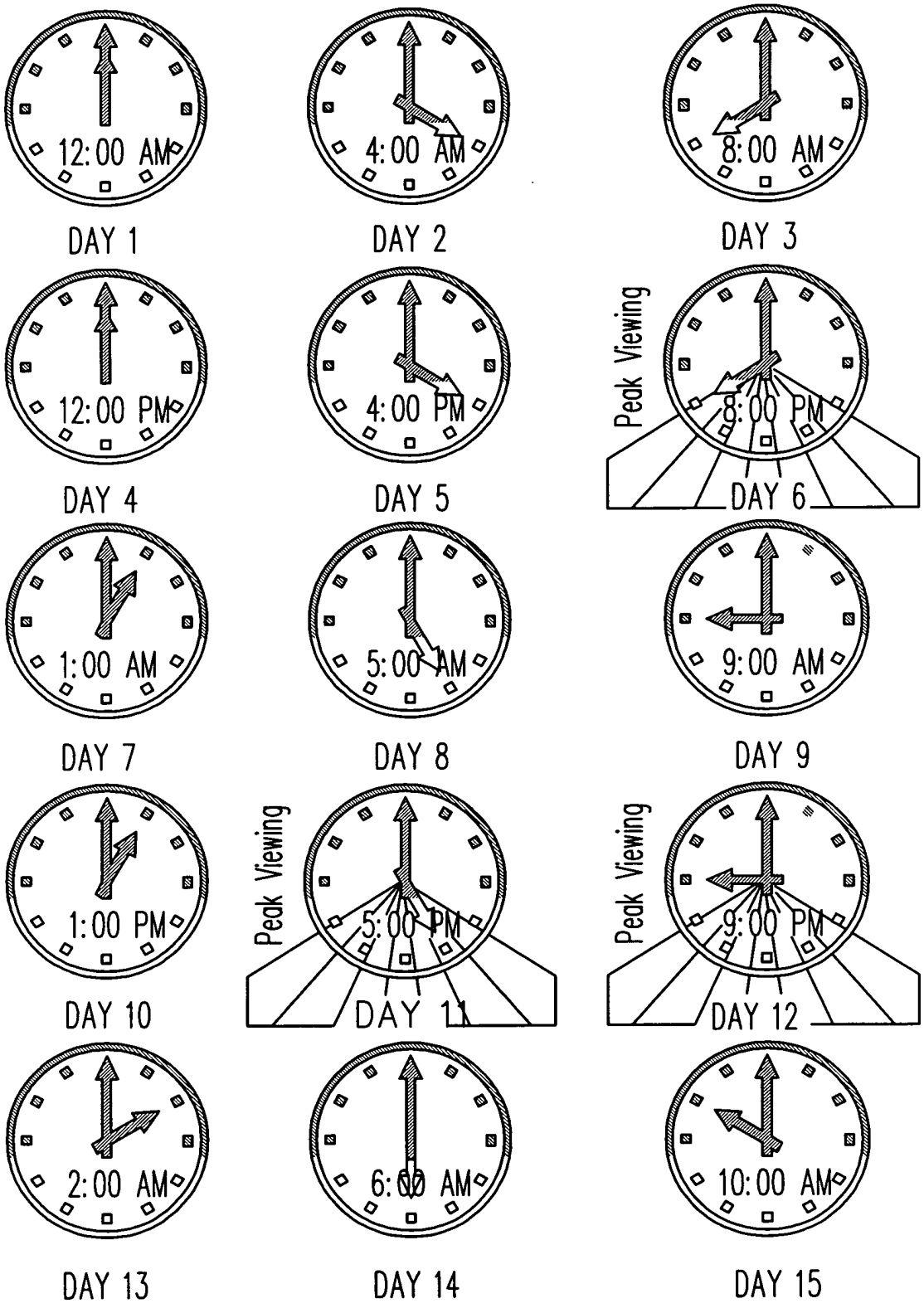

12:00 AM
DAY 1
4:00 AM
DAY 2
8:00 AM
DAY 3
12:00 PM
DAY 4
4:00 PM
DAY 5
Peak Viewing
8:00 PM
DAY 6
1:00 AM
DAY 7
5:00 AM
DAY 8
9:00 AM
DAY 9
1:00 PM
DAY 10
Peak Viewing
5:00 PM
DAY 11
Peak Viewing
9:00 PM
DAY 12
2:00 AM
DAY 13
6:00 AM
DAY 14
10:00 AM
DAY 15

Fig. 15a

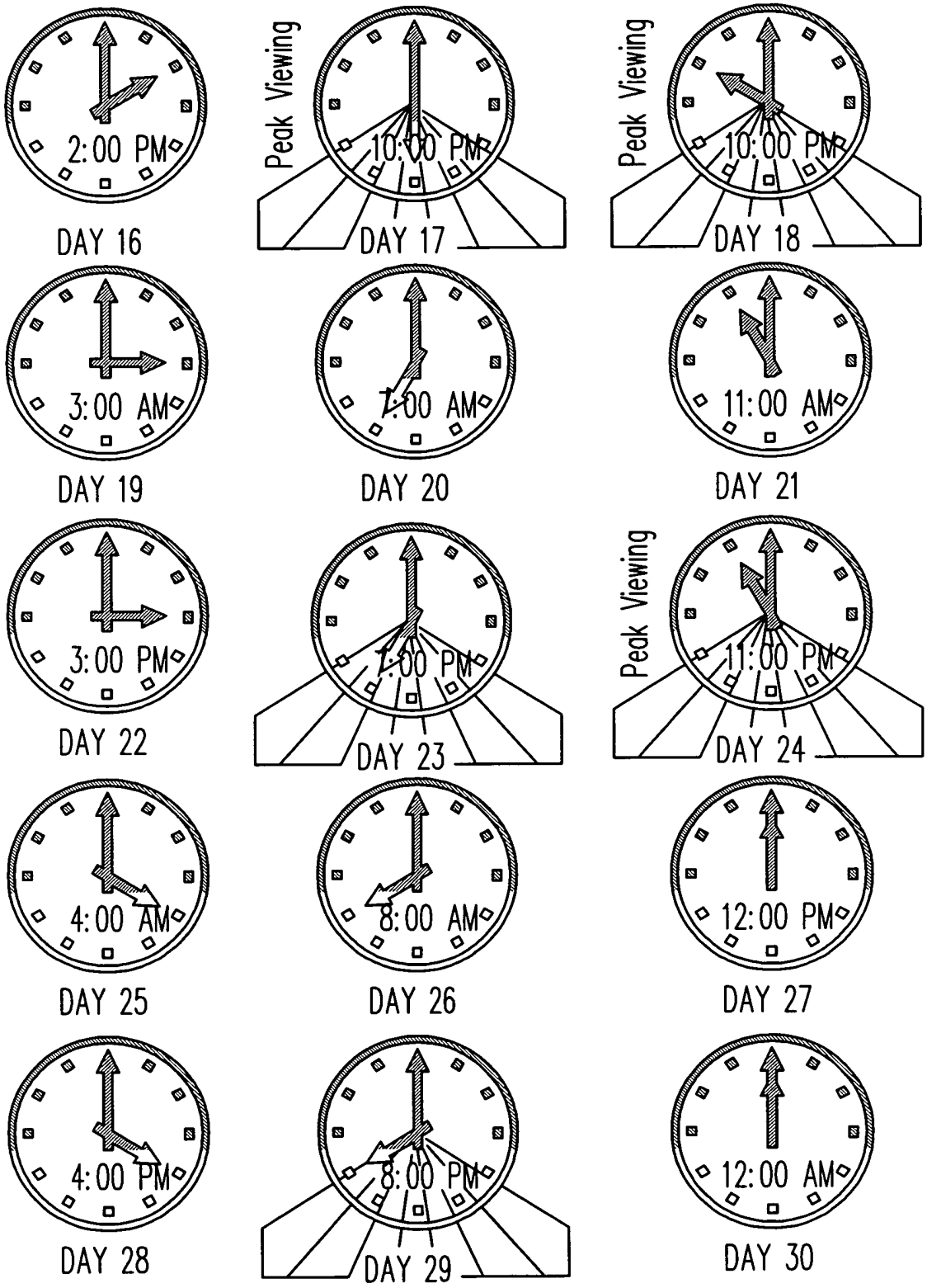

2:00 PM
DAY 16
Peak Viewing
10:00 PM
DAY 17
Peak Viewing
10:00 PM
DAY 18
3:00 AM
DAY 19
1:00 AM
DAY 20
11:00 AM
DAY 21
3:00 PM
DAY 22
1:00 PM
DAY 23
Peak Viewing
11:00 PM
DAY 24
4:00 AM
DAY 25
8:00 AM
DAY 26
12:00 PM
DAY 27
4:00 PM
DAY 28
8:00 PM
DAY 29
12:00 AM
DAY 30

Fig. 15b

Scheduling Module

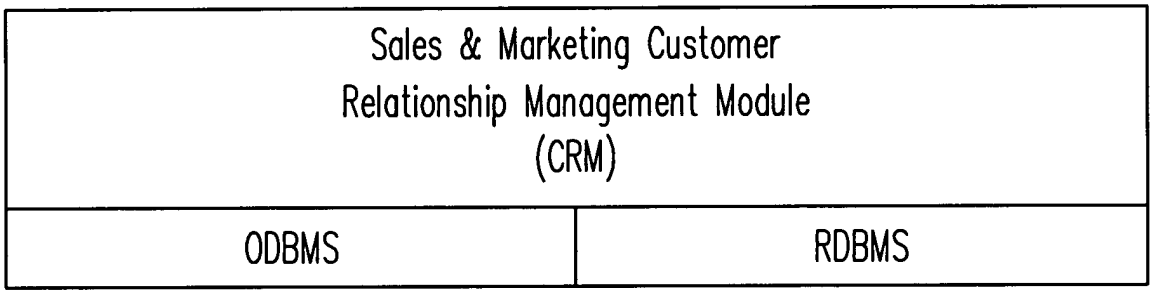


Fig. 16

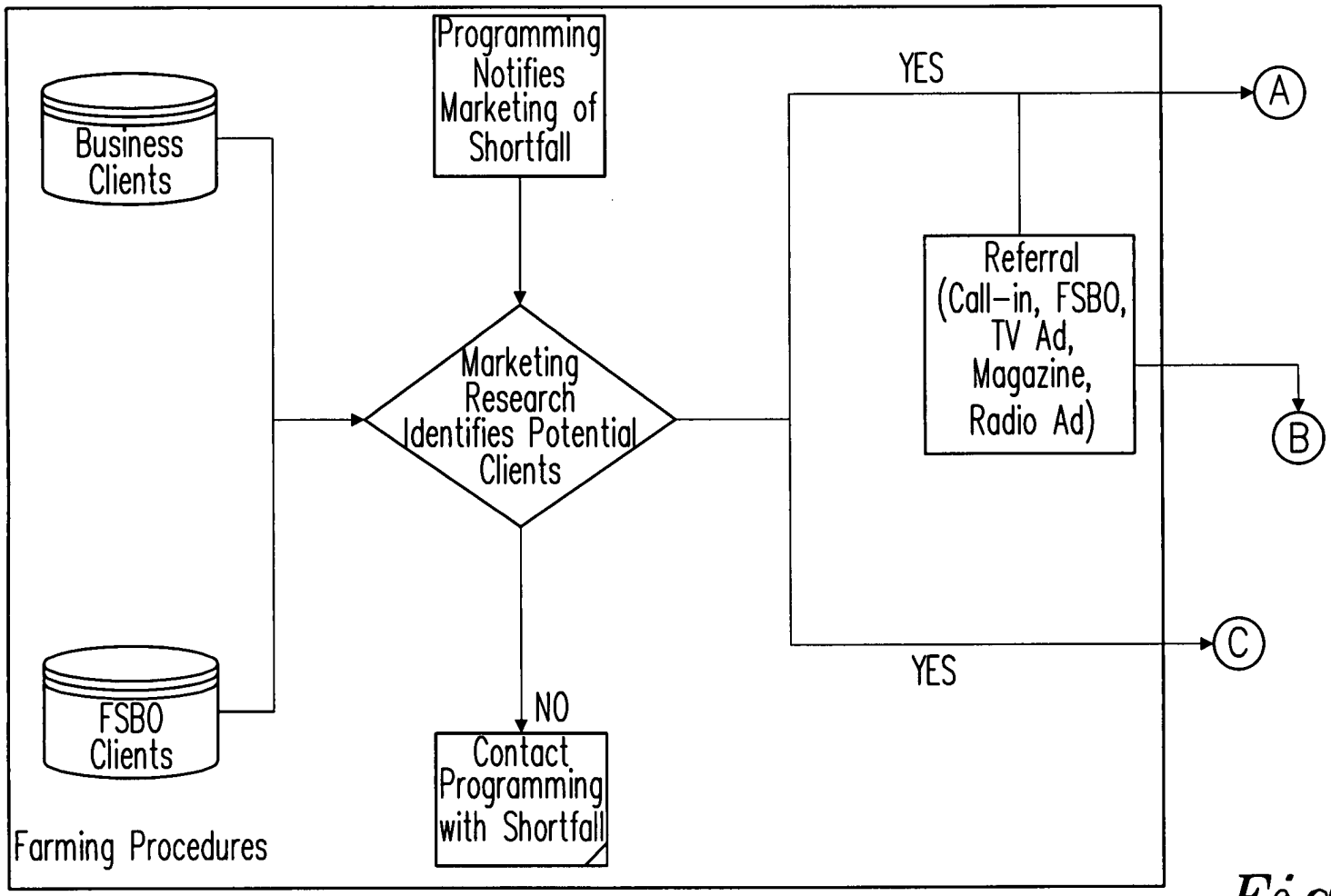
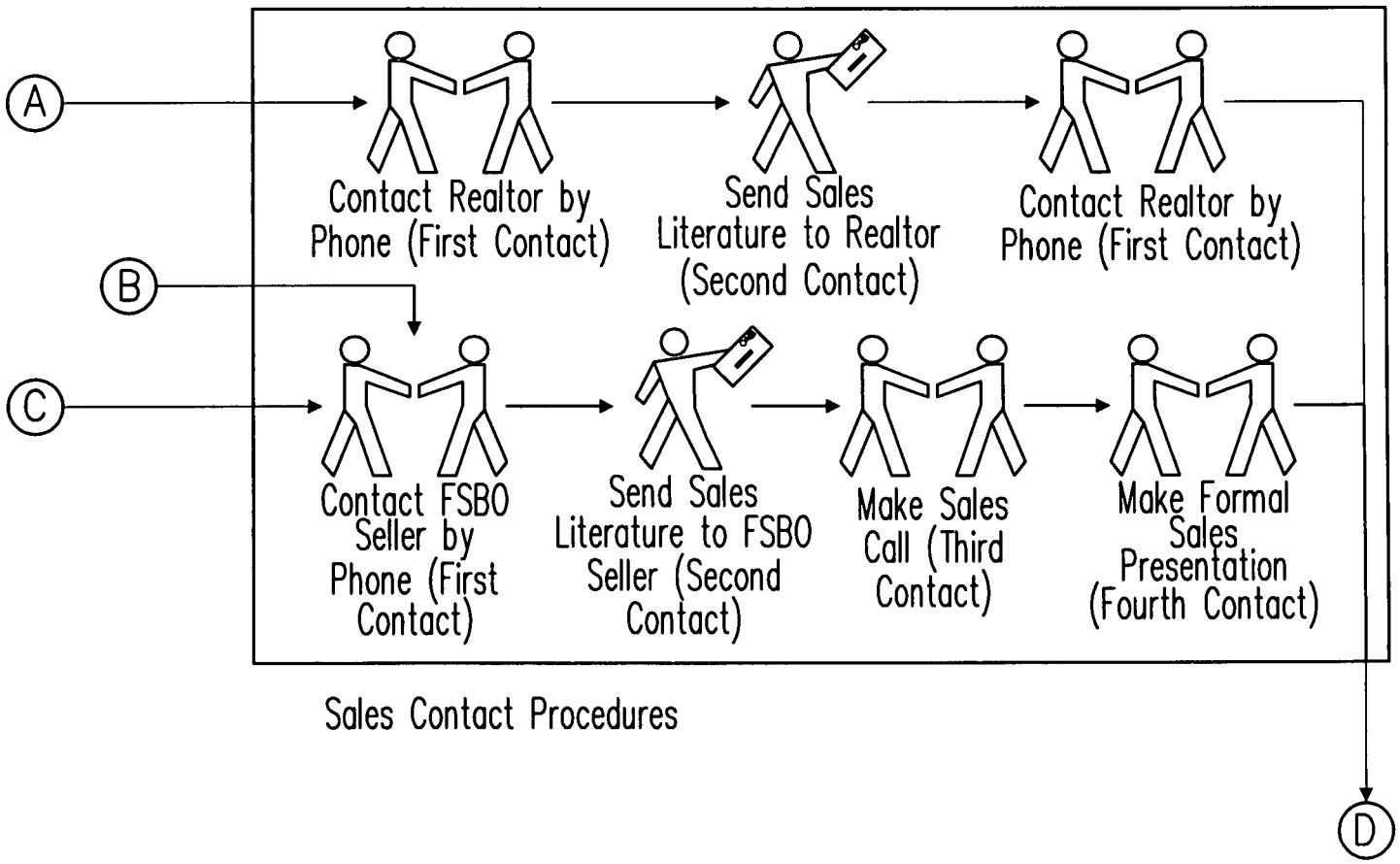

Programming Notifies Marketing of Shortfall
Business Clients
FSBO Clients
Marketing Research Identifies Potential Clients
YES
A
Referral (Call-in, FSBO, TV Ad, Magazine, Radio Ad)
B
YES
C
NO
Contact Programming with Shortfall
Farming Procedures

Fig. 17a



Sales Contact Procedures

Fig. 17b

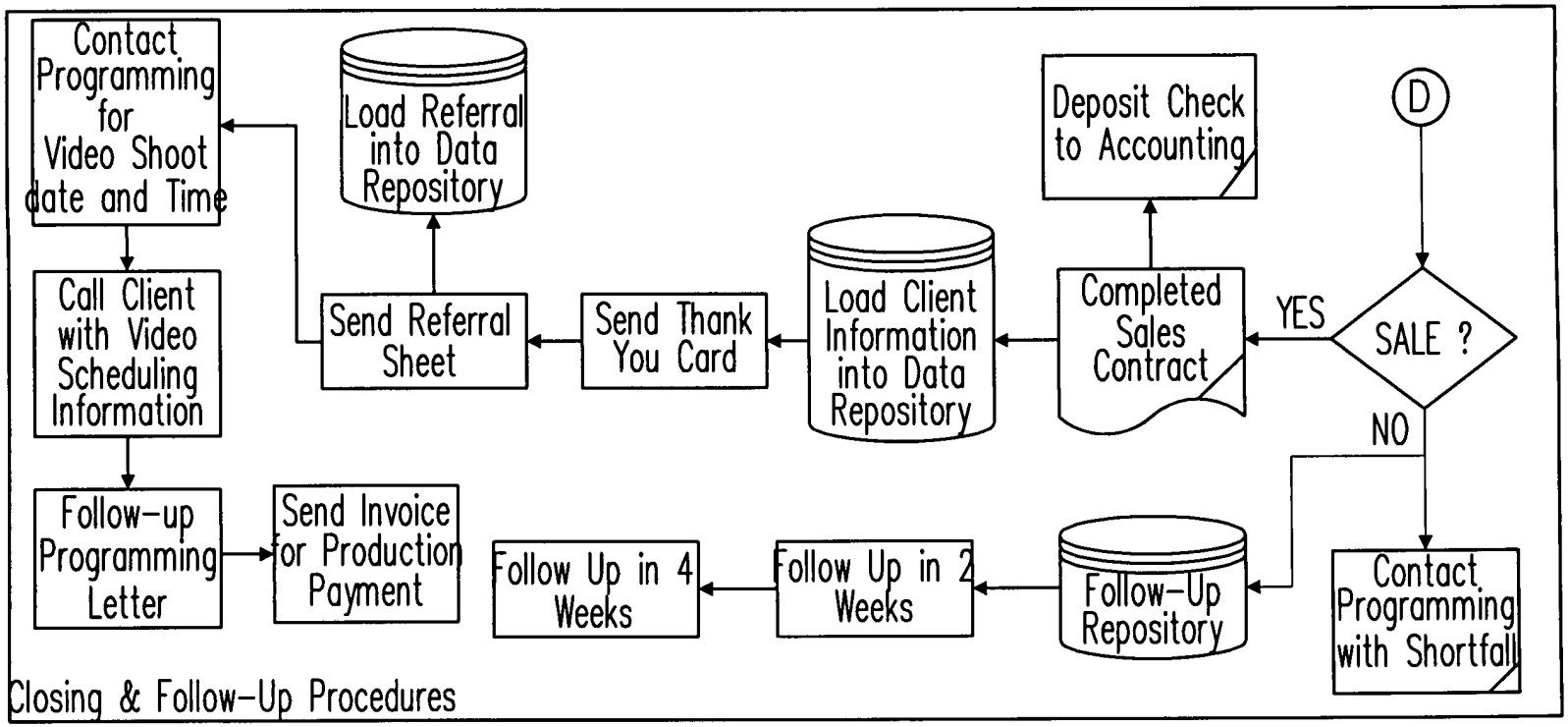

Contact Programming for Video Shoot date and Time
Load Referral into Data Repository
Deposit Check to Accounting
D
Call Client with Video Scheduling Information
Send Referral Sheet
Send Thank You Card
Load Client Information into Data Repository
Completed Sales Contract
YES
SALE ?
NO
Follow-up Programming Letter
Send Invoice for Production Payment
Follow Up in 4 Weeks
Follow Up in 2 Weeks
Follow-Up Repository
Contact Programming with Shortfall
Closing & Follow-Up Procedures

Fig. 17c

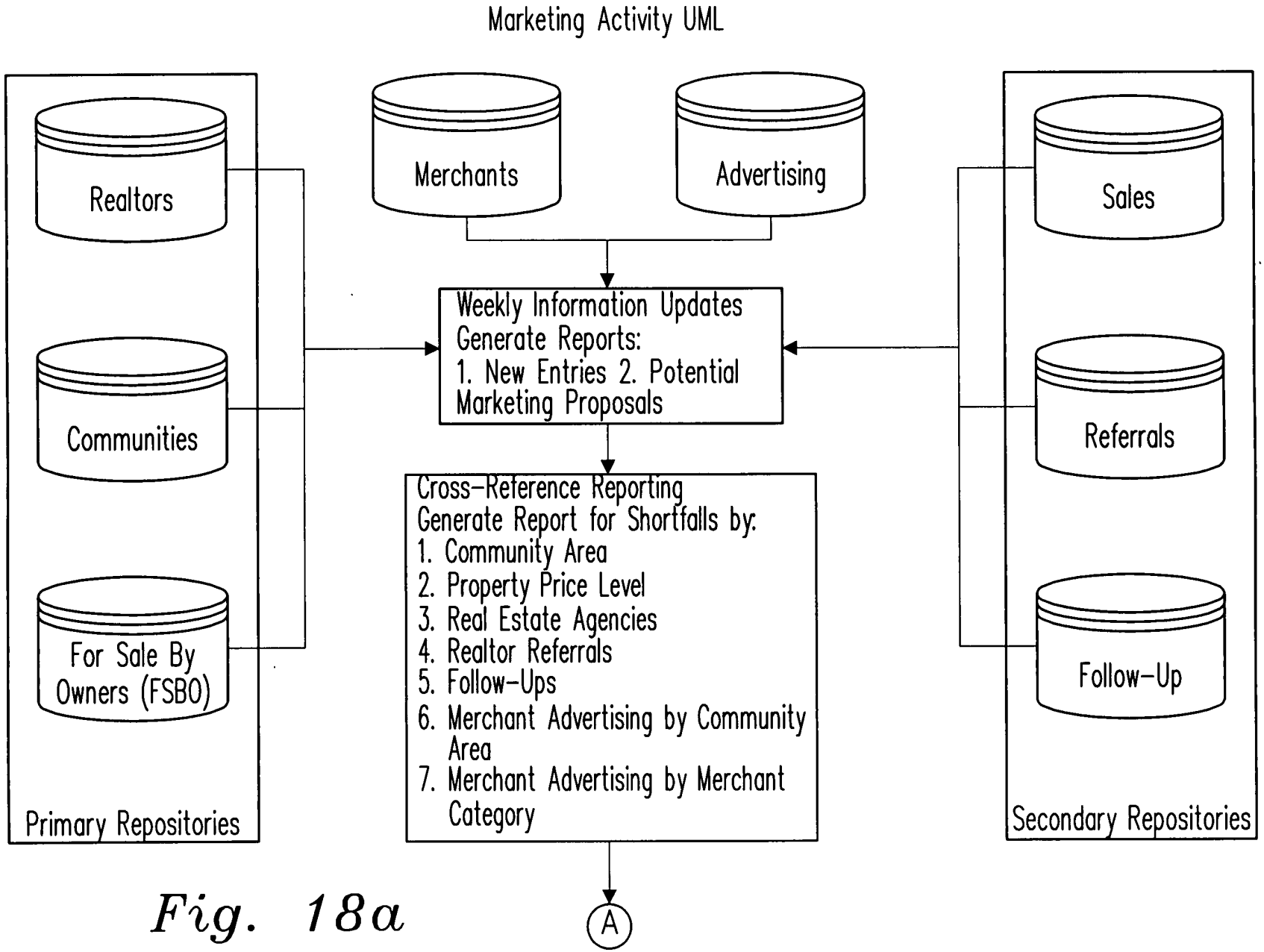

Marketing Activity UML
Realtors
Communities
For Sale By Owners (FSBO)
Primary Repositories
Merchants
Advertising
Weekly Information Updates
Generate Reports:
1. New Entries 2. Potential Marketing Proposals
Cross-Reference Reporting
Generate Report for Shortfalls by:
1. Community Area
2. Property Price Level
3. Real Estate Agencies
4. Realtor Referrals
5. Follow-Ups
6. Merchant Advertising by Community Area
7. Merchant Advertising by Merchant Category
A
Sales
Referrals
Follow-Up
Secondary Repositories

Fig. 18a

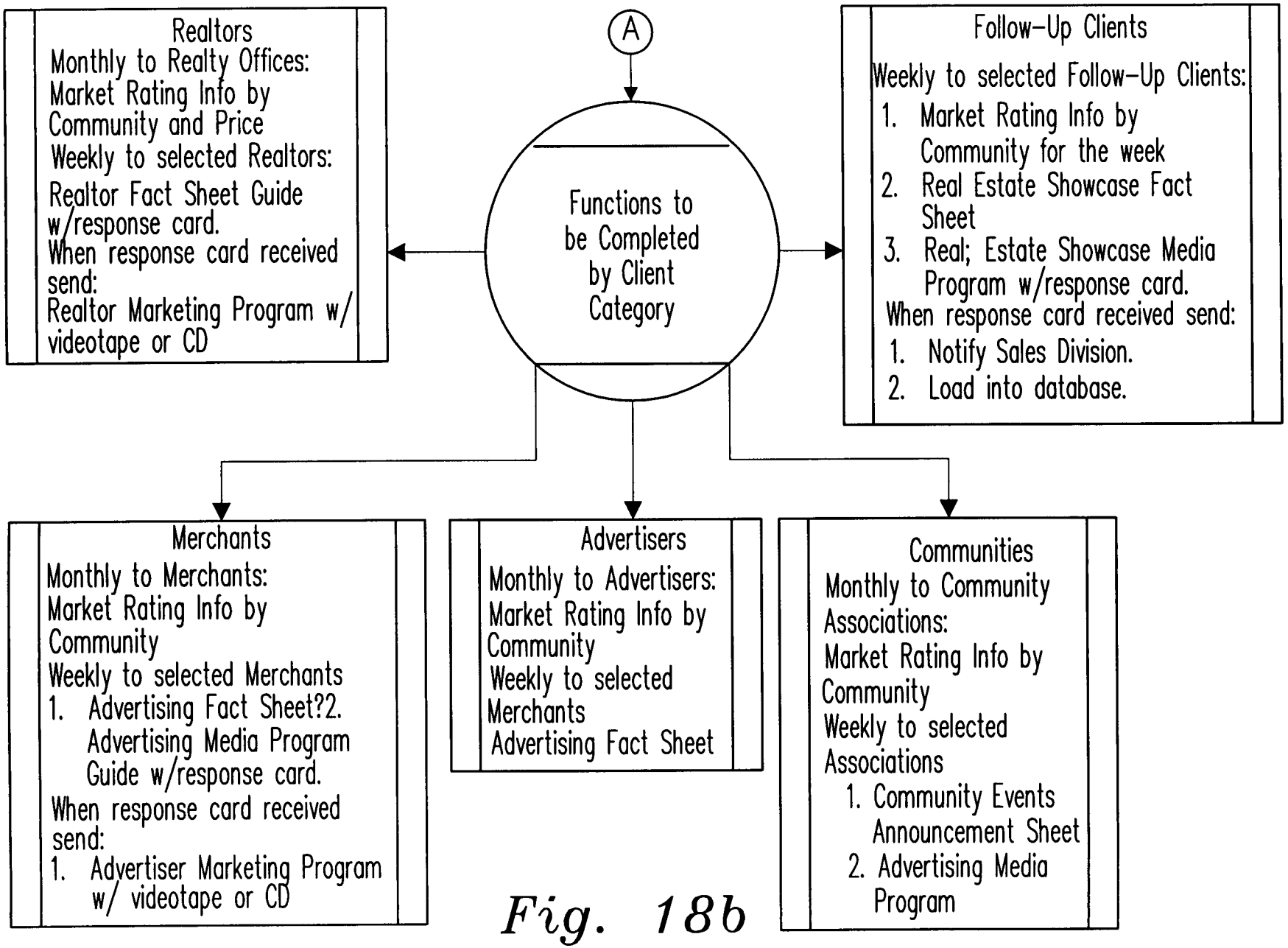

A
Functions to be Completed by Client Category
Realtors
Monthly to Realty Offices:
Market Rating Info by Community and Price
Weekly to selected Realtors:
Realtor Fact Sheet Guide w/response card.
When response card received send:
Realtor Marketing Program w/ videotape or CD
Follow-Up Clients
Weekly to selected Follow-Up Clients:
1. Market Rating Info by Community for the week
2. Real Estate Showcase Fact Sheet
3. Real; Estate Showcase Media Program w/response card.
When response card received send:
1. Notify Sales Division.
2. Load into database.
Merchants
Monthly to Merchants:
Market Rating Info by Community
Weekly to selected Merchants
1. Advertising Fact Sheet?2. Advertising Media Program Guide w/response card.
When response card received send:
1. Advertiser Marketing Program w/ videotape or CD
Advertisers
Monthly to Advertisers:
Market Rating Info by Community
Weekly to selected Merchants
Advertising Fact Sheet
Communities
Monthly to Community Associations:
Market Rating Info by Community
Weekly to selected Associations
1. Community Events Announcement Sheet
2. Advertising Media Program

Fig. 18b

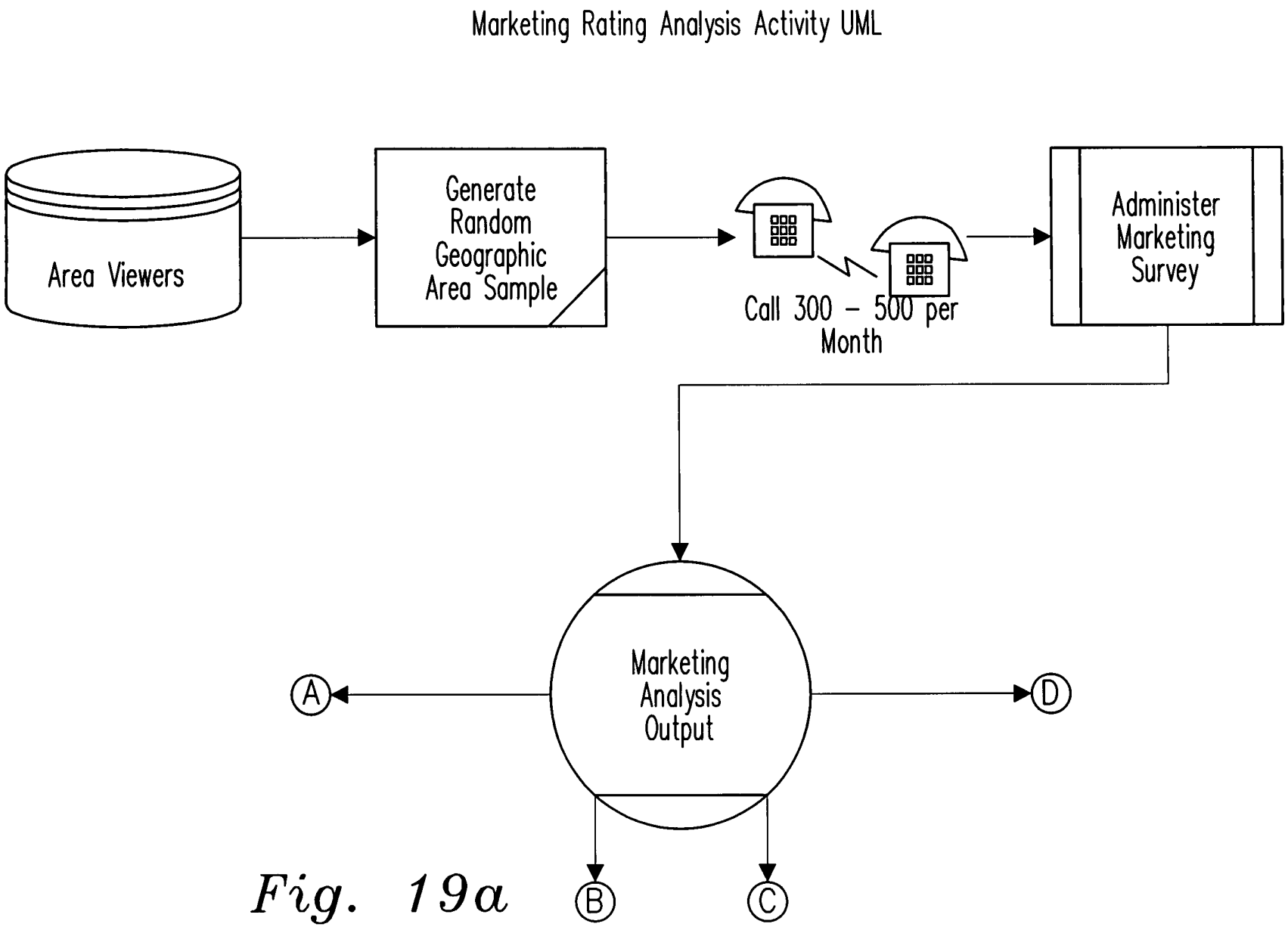
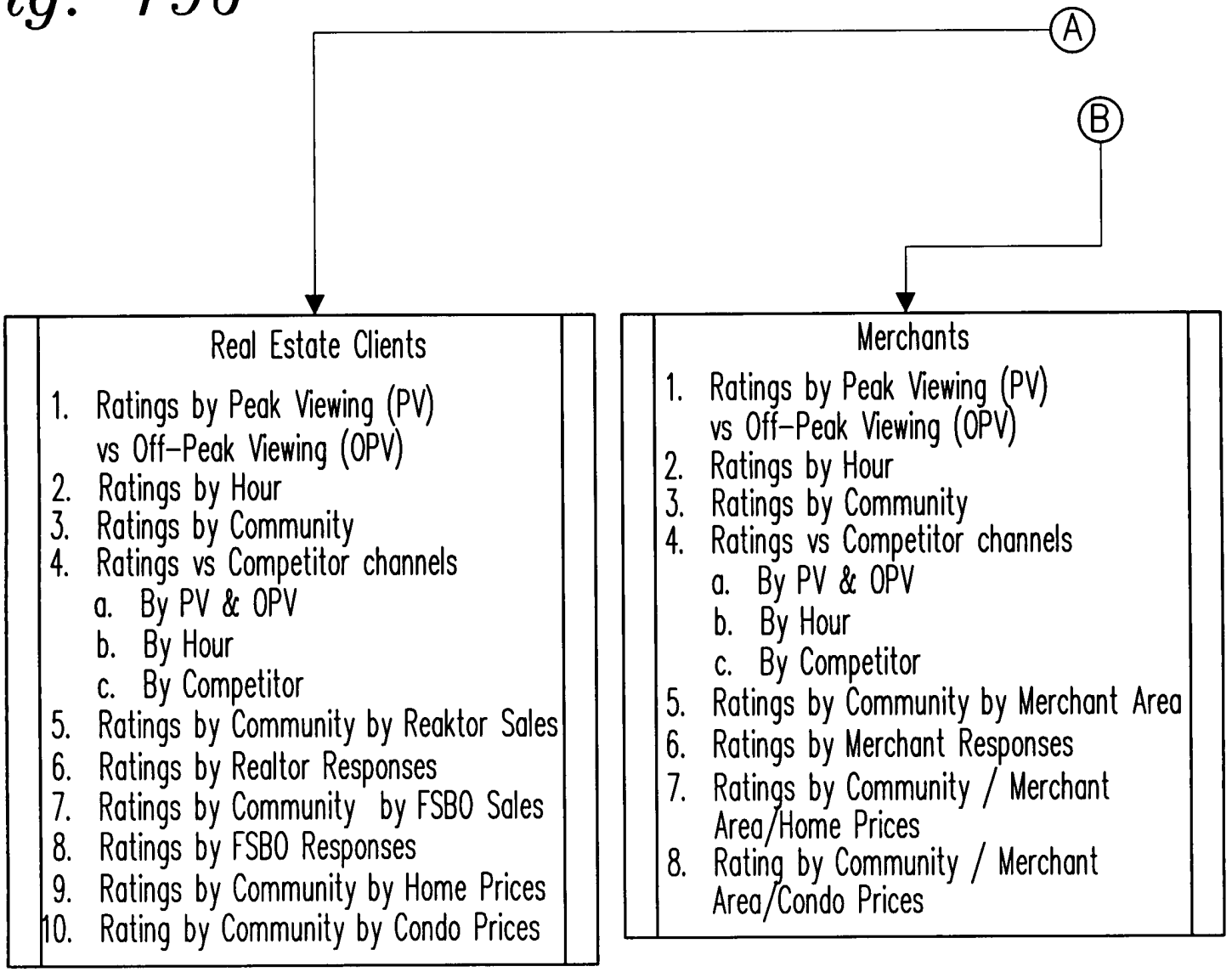

Marketing Rating Analysis Activity UML
Area Viewers
Generate Random Geographic Area Sample
Call 300 – 500 per Month
Administer Marketing Survey
Marketing Analysis Output
A
B
C
D

Fig. 19a

Fig. 19b


A
B
Real Estate Clients
1. Ratings by Peak Viewing (PV) vs Off-Peak Viewing (OPV)
2. Ratings by Hour
3. Ratings by Community
4. Ratings vs Competitor channels
a. By PV & OPV
b. By Hour
c. By Competitor
5. Ratings by Community by Reaktor Sales
6. Ratings by Realtor Responses
7. Ratings by Community by FSBO Sales
8. Ratings by FSBO Responses
9. Ratings by Community by Home Prices
10. Rating by Community by Condo Prices
Merchants
1. Ratings by Peak Viewing (PV) vs Off-Peak Viewing (OPV)
2. Ratings by Hour
3. Ratings by Community
4. Ratings vs Competitor channels
a. By PV & OPV
b. By Hour
c. By Competitor
5. Ratings by Community by Merchant Area
6. Ratings by Merchant Responses
7. Ratings by Community / Merchant Area/Home Prices
8. Rating by Community / Merchant Area/Condo Prices

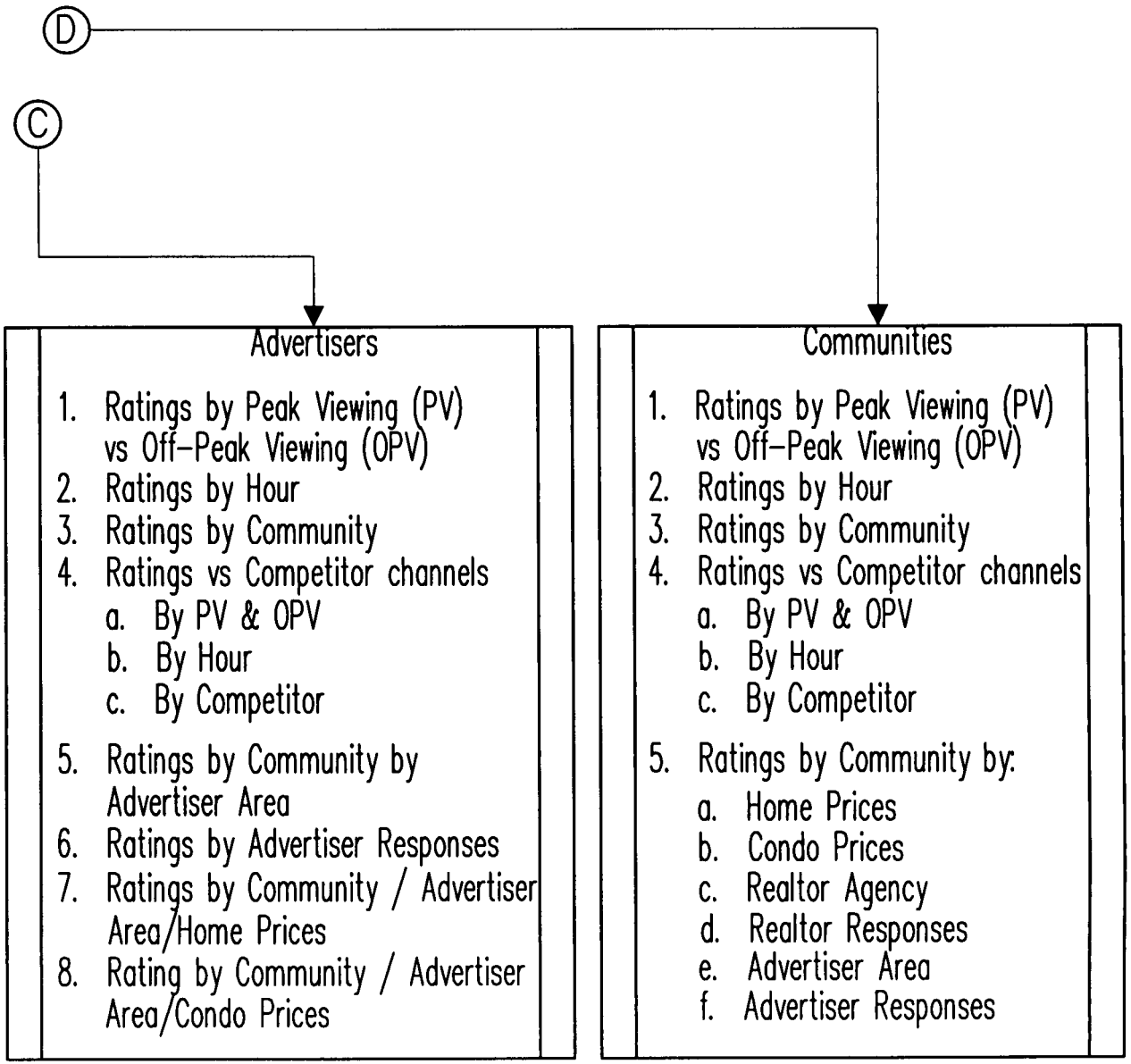
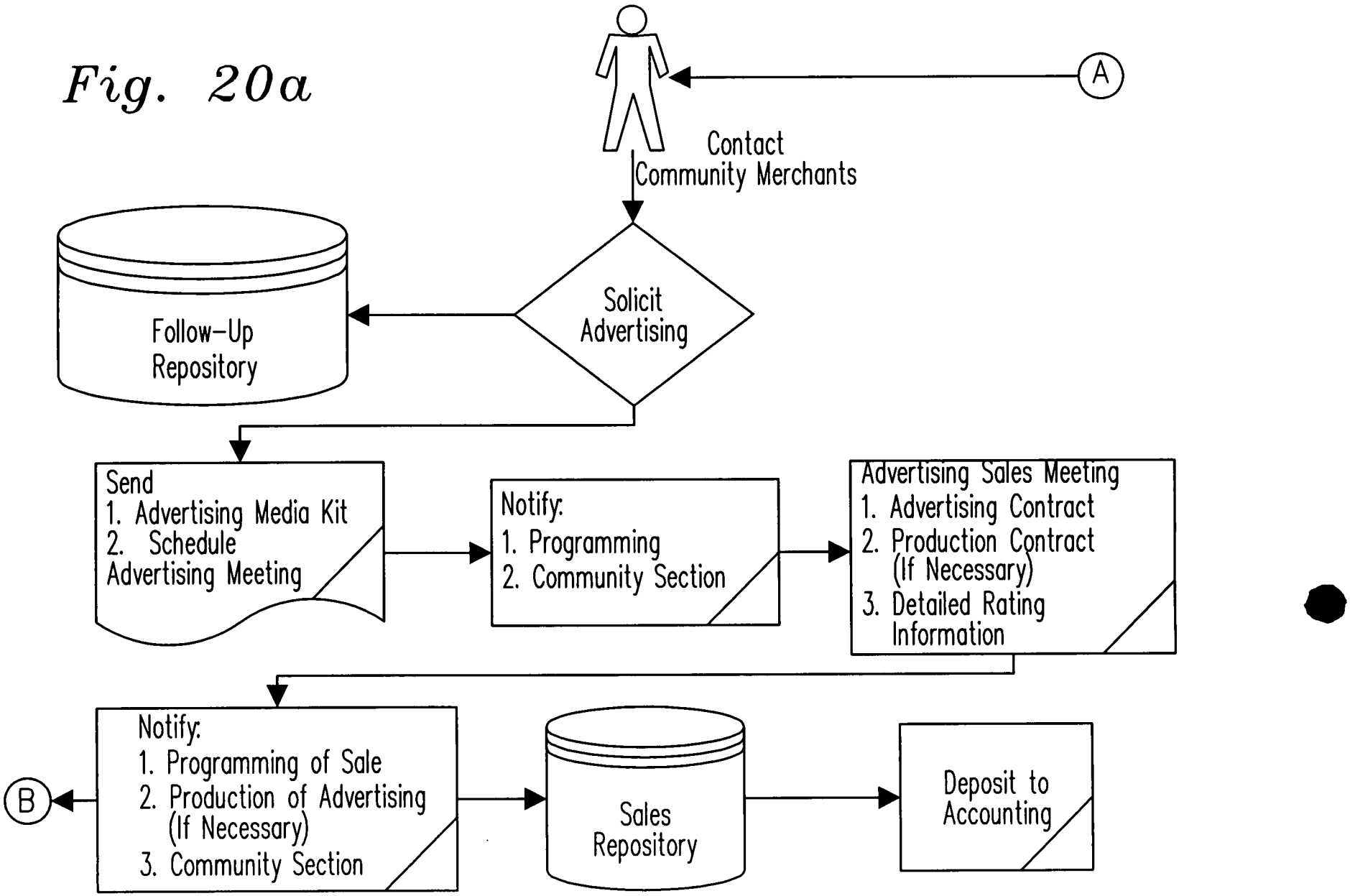

D
C
Advertisers
1. Ratings by Peak Viewing (PV) vs Off-Peak Viewing (OPV)
2. Ratings by Hour
3. Ratings by Community
4. Ratings vs Competitor channels
a. By PV & OPV
b. By Hour
c. By Competitor
5. Ratings by Community by Advertiser Area
6. Ratings by Advertiser Responses
7. Ratings by Community / Advertiser Area/Home Prices
8. Rating by Community / Advertiser Area/Condo Prices
Communities
1. Ratings by Peak Viewing (PV) vs Off-Peak Viewing (OPV)
2. Ratings by Hour
3. Ratings by Community
4. Ratings vs Competitor channels
a. By PV & OPV
b. By Hour
c. By Competitor
5. Ratings by Community by:
a. Home Prices
b. Condo Prices
c. Realtor Agency
d. Realtor Responses
e. Advertiser Area
f. Advertiser Responses

Fig. 19c

Fig. 20a


A
Contact
Community Merchants
Solicit
Advertising
Follow-Up
Repository
Send
1. Advertising Media Kit
2. Schedule
Advertising Meeting
Notify:
1. Programming
2. Community Section
Advertising Sales Meeting
1. Advertising Contract
2. Production Contract
(If Necessary)
3. Detailed Rating
Information
B
Notify:
1. Programming of Sale
2. Production of Advertising
(If Necessary)
3. Community Section
Sales
Repository
Deposit to
Accounting

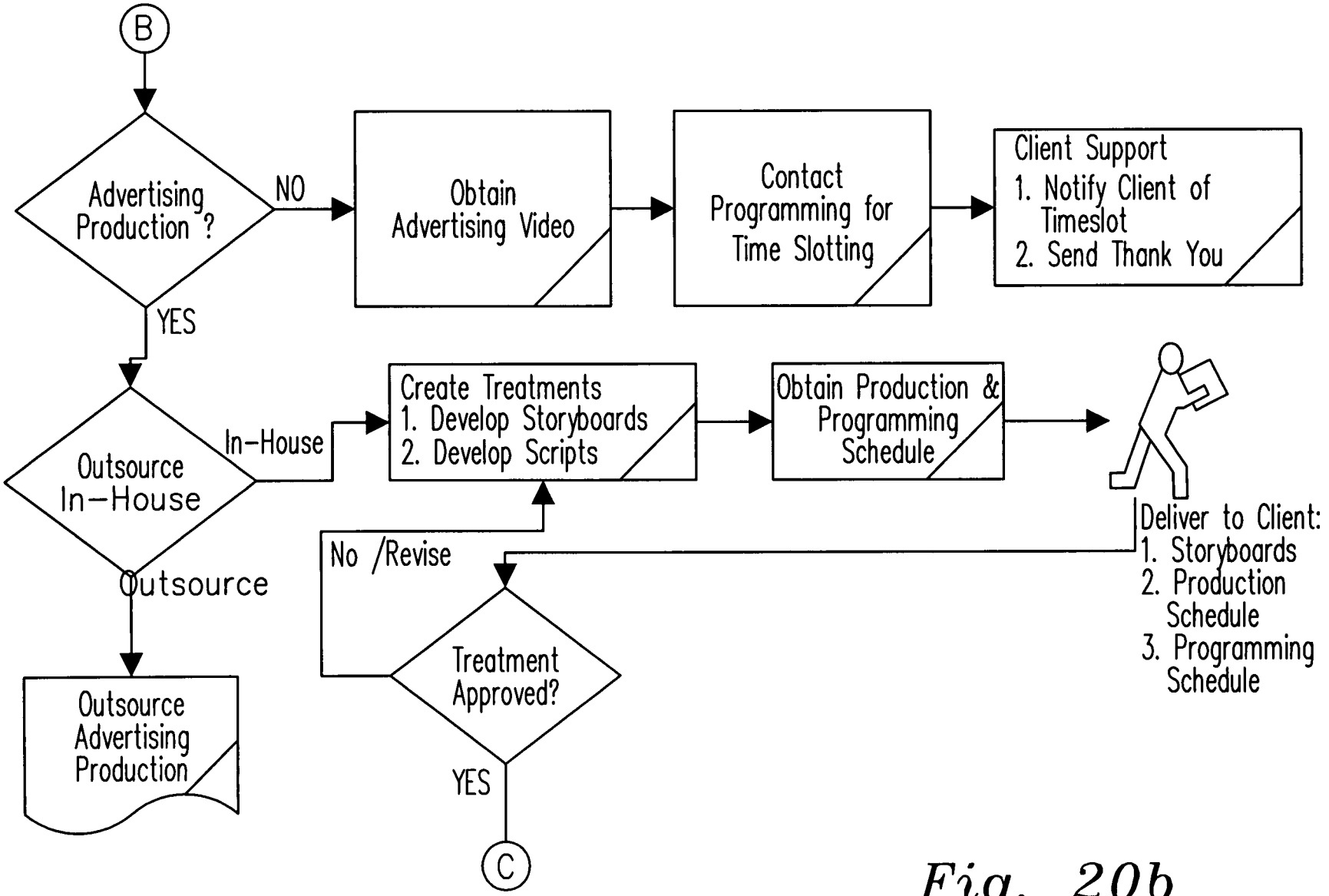

B
Advertising Production ?
NO
Obtain Advertising Video
Contact Programming for Time Slotting
Client Support
1. Notify Client of Timeslot
2. Send Thank You
YES
Outsource In-House
In-House
Create Treatments
1. Develop Storyboards
2. Develop Scripts
Obtain Production & Programming Schedule
Deliver to Client:
1. Storyboards
2. Production Schedule
3. Programming Schedule
Outsource
No /Revise
Treatment Approved?
Outsource Advertising Production
YES
C

Fig. 20b

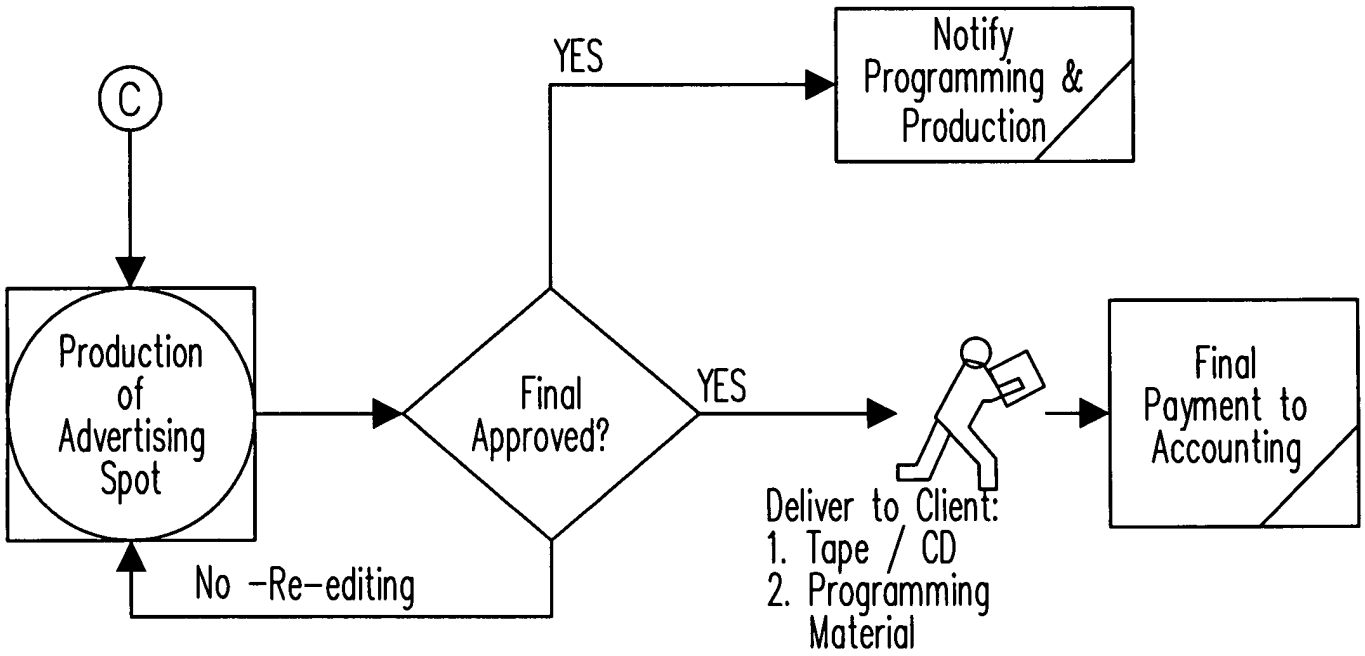

C
Production of Advertising Spot
Final Approved?
YES
Notify Programming & Production
YES
No -Re-editing
Deliver to Client:
1. Tape / CD
2. Programming Material
Final Payment to Accounting

Fig. 20c

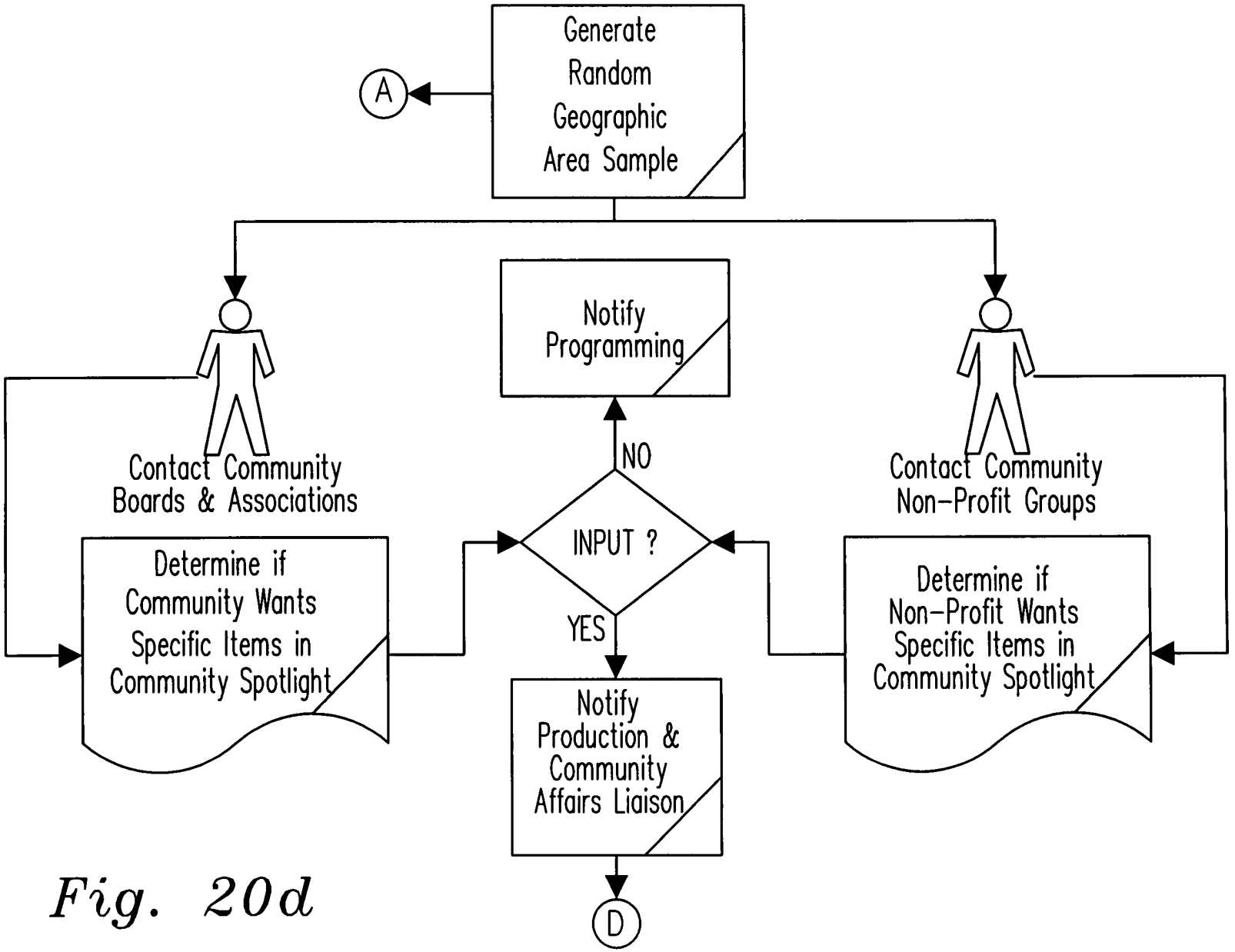

Generate
Random
Geographic
Area Sample
A
Notify
Programming
Contact Community
Boards & Associations
Contact Community
Non-Profit Groups
NO
INPUT ?
YES
Determine if
Community Wants
Specific Items in
Community Spotlight
Determine if
Non-Profit Wants
Specific Items in
Community Spotlight
Notify
Production &
Community
Affairs Liaison
D

Fig. 20d

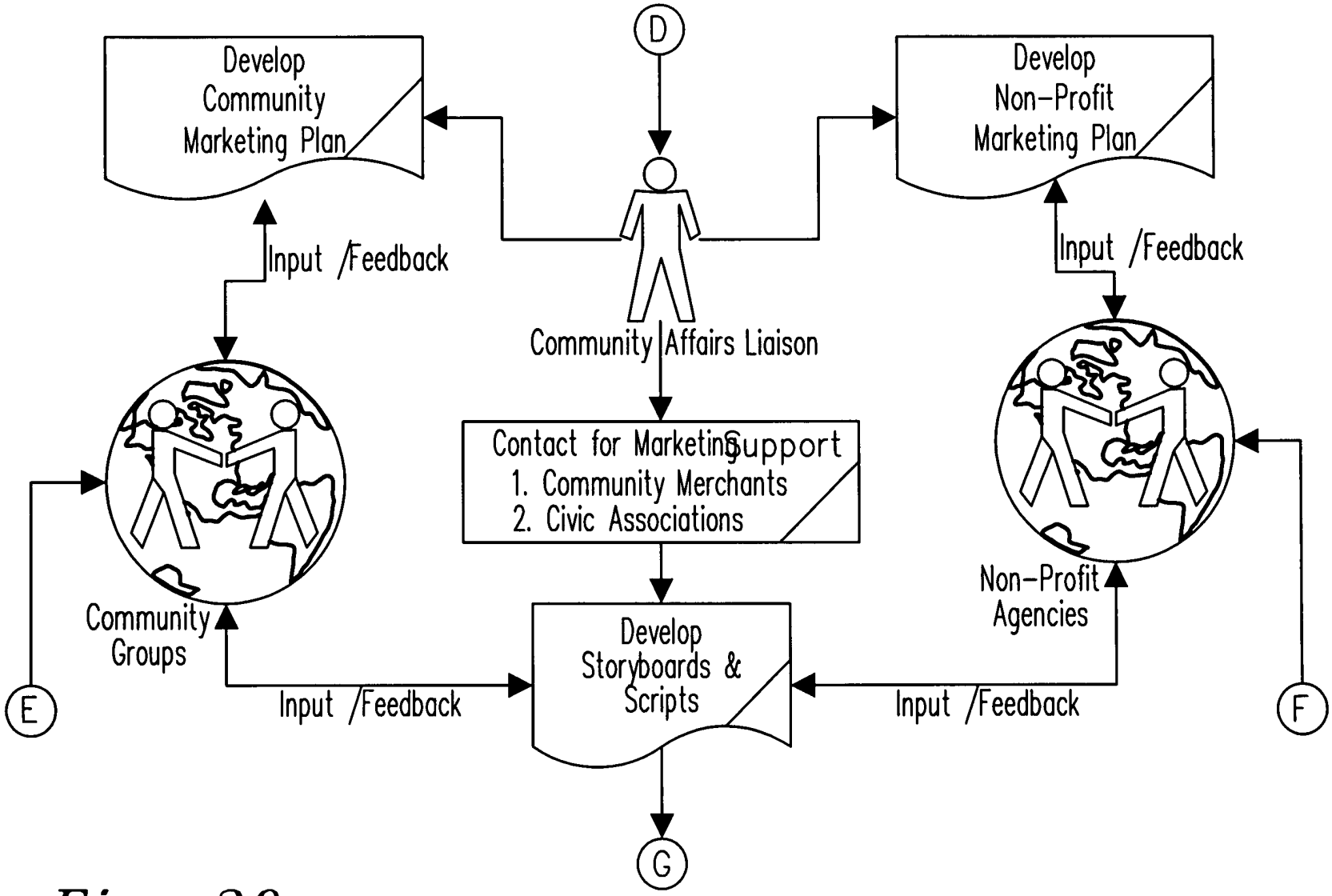

D
Develop
Community
Marketing Plan
Develop
Non-Profit
Marketing Plan
Input /Feedback
Input /Feedback
Community Affairs Liaison
Contact for Marketing Support
1. Community Merchants
2. Civic Associations
Community
Groups
Non-Profit
Agencies
Develop
Storyboards &
Scripts
E
Input /Feedback
Input /Feedback
F
G

Fig. 20e

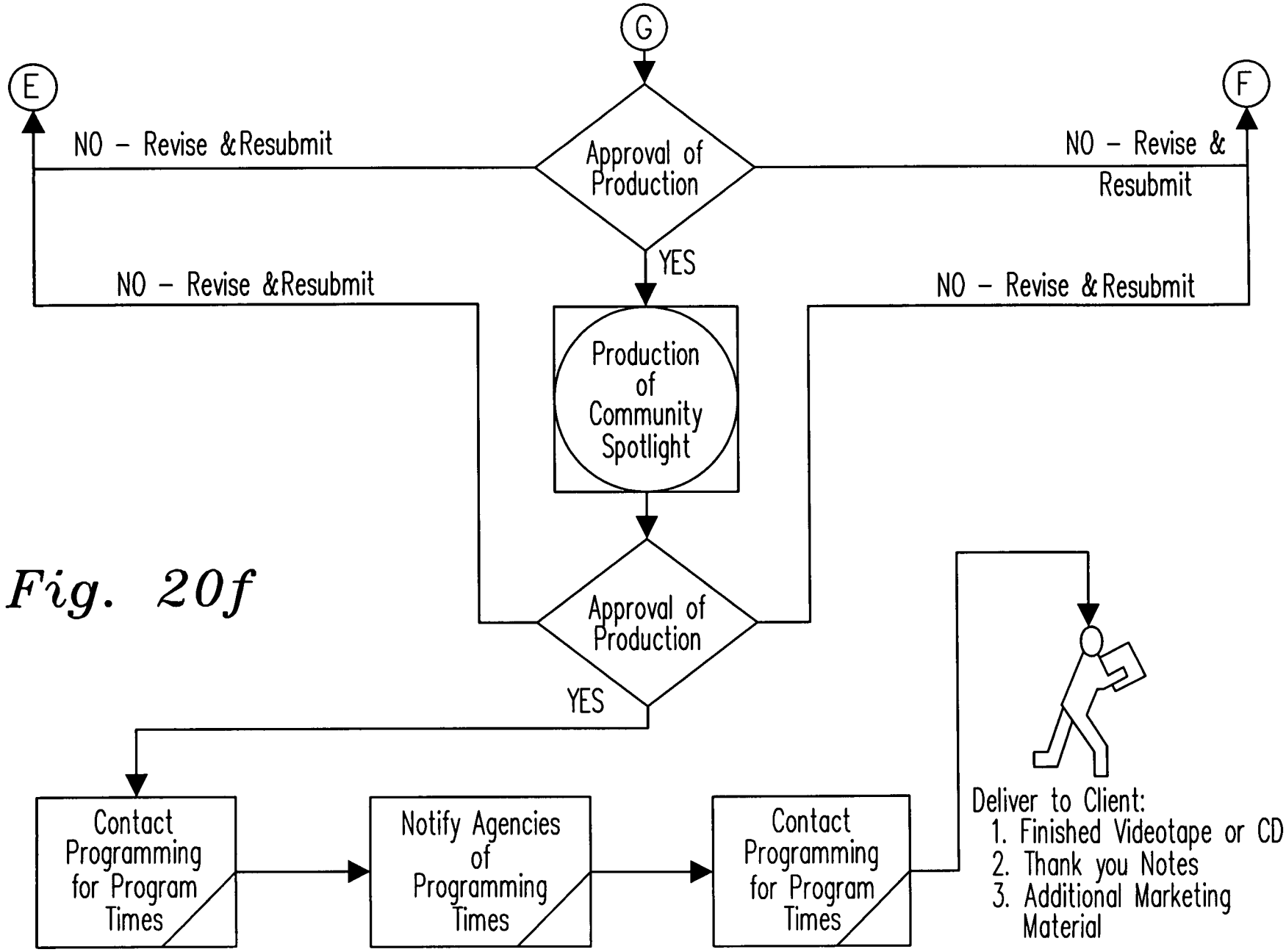

G
E
F
NO – Revise &Resubmit
Approval of Production
NO – Revise & Resubmit
YES
NO – Revise &Resubmit
NO – Revise &Resubmit
Production of Community Spotlight
Approval of Production
YES
Contact Programming for Program Times
Notify Agencies of Programming Times
Contact Programming for Program Times
Deliver to Client:
1. Finished Videotape or CD
2. Thank you Notes
3. Additional Marketing Material

Fig. 20f

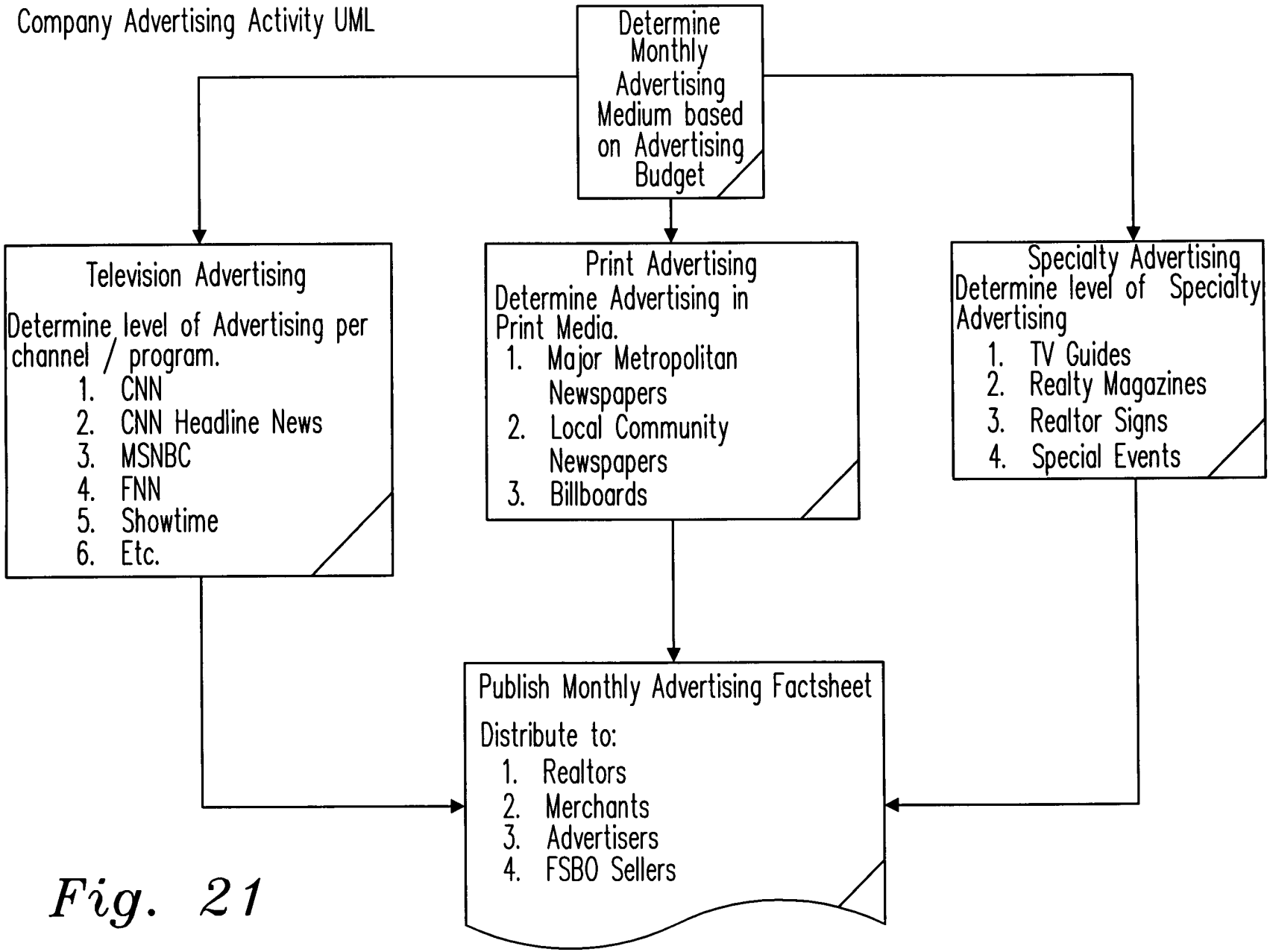

Company Advertising Activity UML
Determine Monthly Advertising Medium based on Advertising Budget
Television Advertising
Determine level of Advertising per channel / program.
1. CNN
2. CNN Headline News
3. MSNBC
4. FNN
5. Showtime
6. Etc.
Print Advertising
Determine Advertising in Print Media.
1. Major Metropolitan Newspapers
2. Local Community Newspapers
3. Billboards
Specialty Advertising
Determine level of Specialty Advertising
1. TV Guides
2. Realty Magazines
3. Realtor Signs
4. Special Events
Publish Monthly Advertising Factsheet
Distribute to:
1. Realtors
2. Merchants
3. Advertisers
4. FSBO Sellers

Fig. 21

Scheduling Module

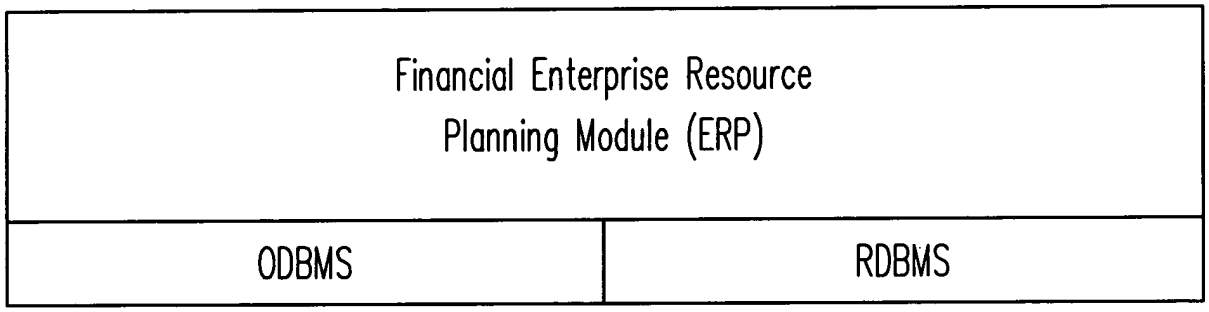


Fig. 22

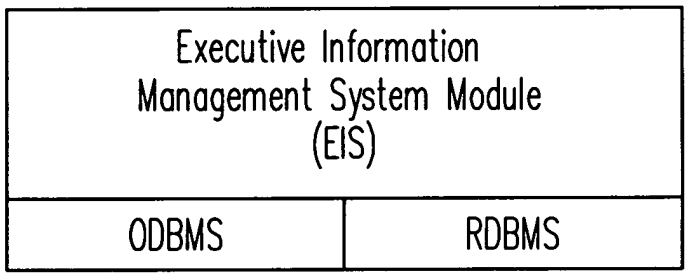

Executive Information
Management System Module
(EIS)
Executive Information
Management System Module
(EIS)
ODBMS
RDBMS

Fig. 23

Knowledge Management

Information Decision Support

System Module

(KMIDSS)

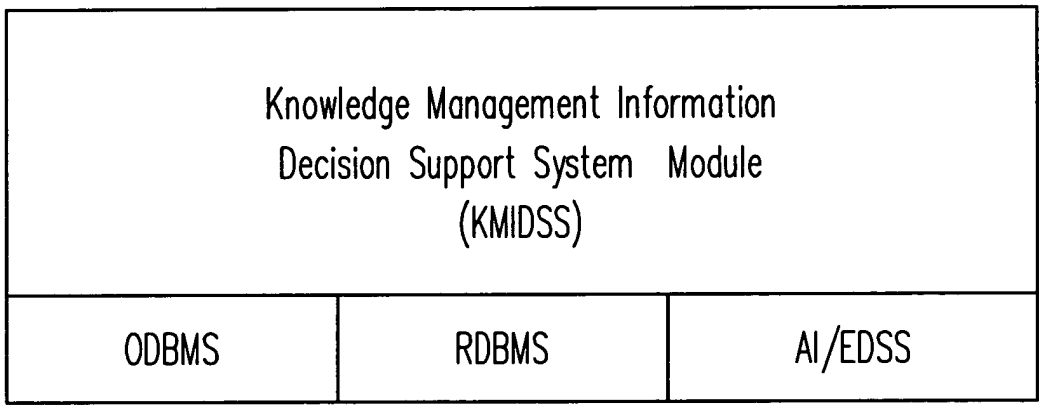


Fig. 24

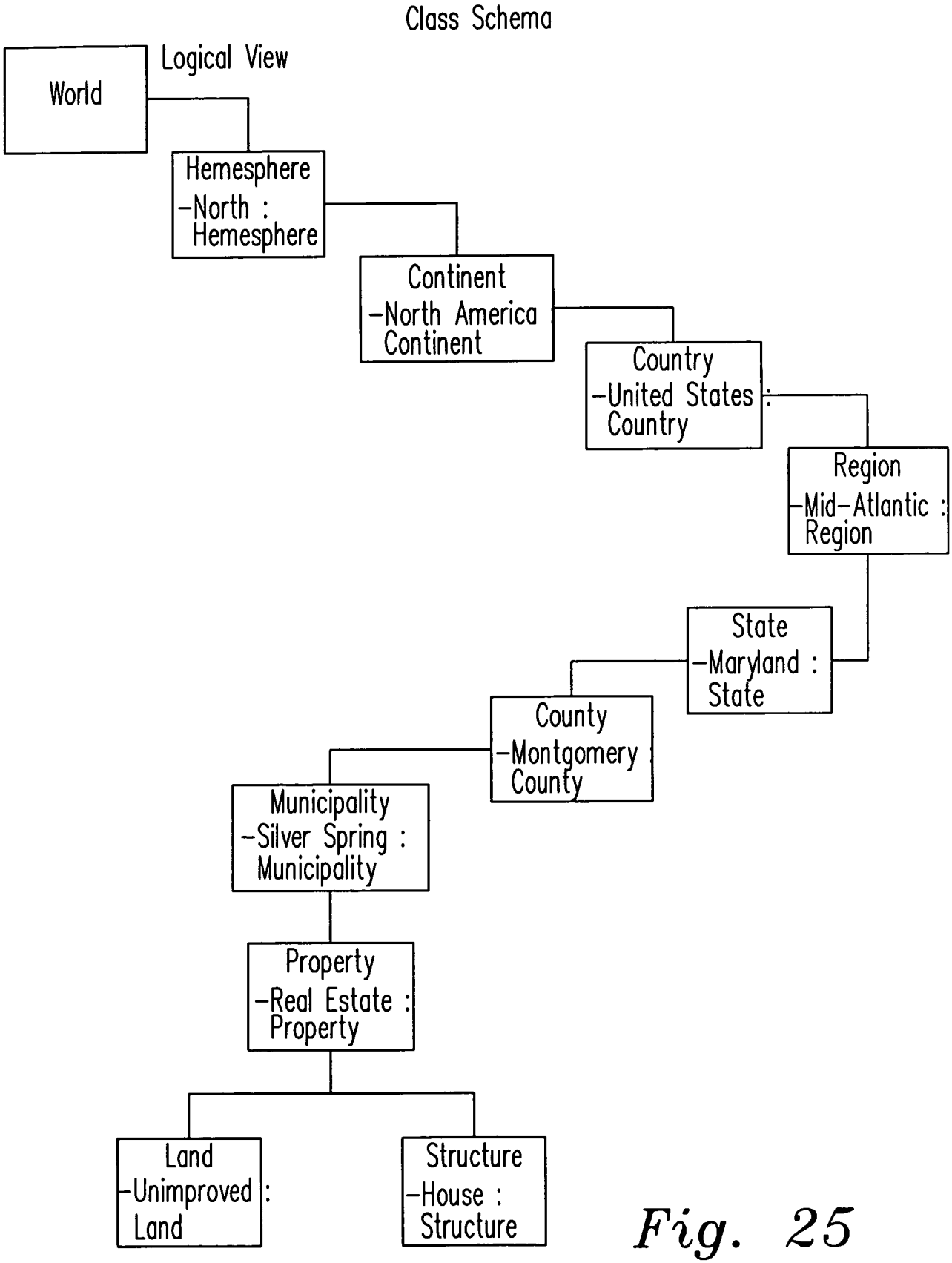

Class Schema
Logical View
World
Hemesphere
-North : Hemesphere
Continent
-North America Continent
Country
-United States : Country
Region
-Mid-Atlantic : Region
State
-Maryland : State
County
-Montgomery County
Municipality
-Silver Spring : Municipality
Property
-Real Estate : Property
Land
-Unimproved : Land
Structure
-House : Structure

Fig. 25

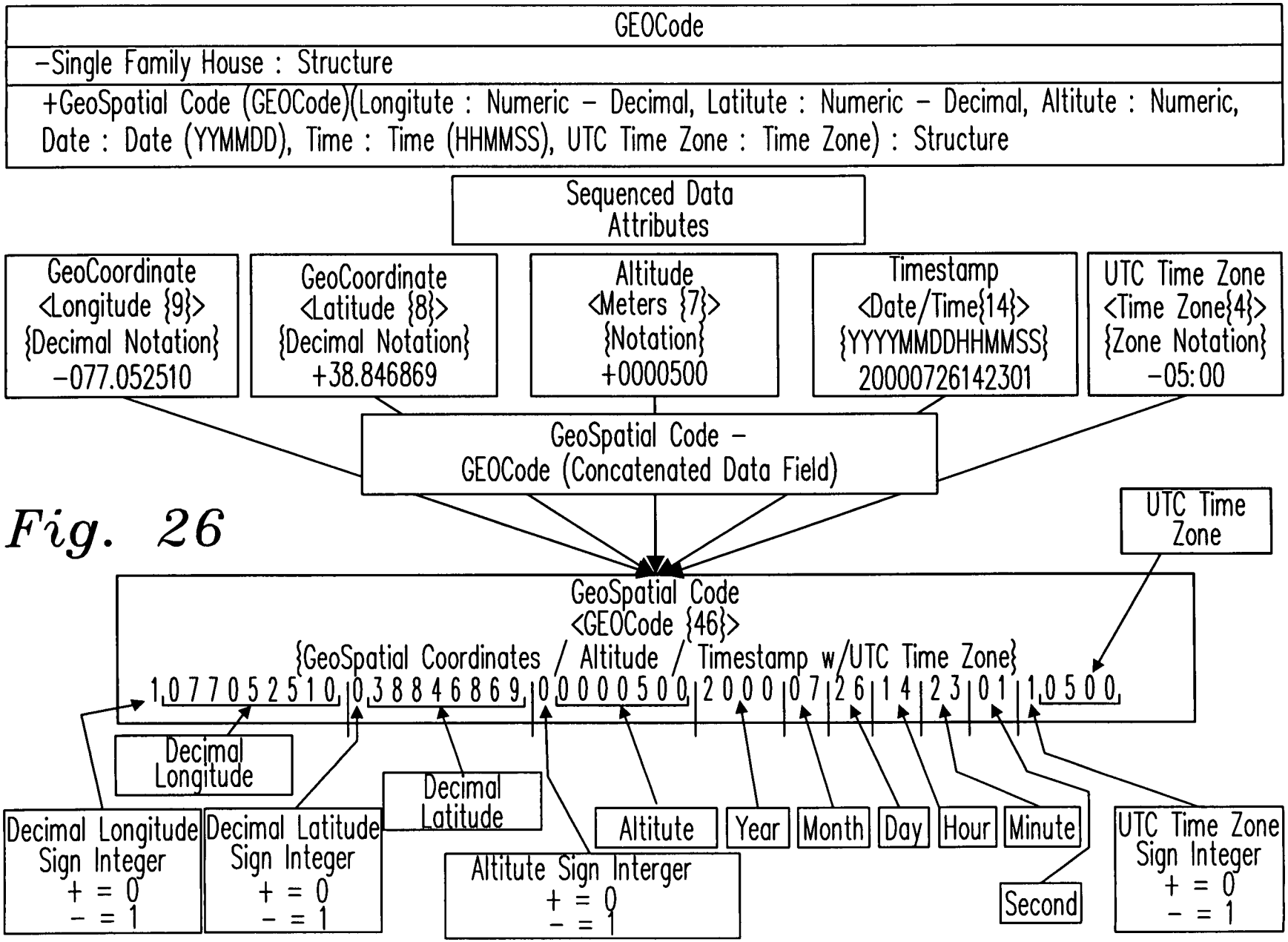

GEOCode
-Single Family House : Structure
+GeoSpatial Code (GEOCode)(Longitute : Numeric - Decimal, Latitute : Numeric - Decimal, Altitute : Numeric, Date : Date (YYMMDD), Time : Time (HHMMSS), UTC Time Zone : Time Zone) : Structure
Sequenced Data Attributes
GeoCoordinate <Longitude {9}> {Decimal Notation} -077.052510
GeoCoordinate <Latitude {8}> {Decimal Notation} +38.846869
Altitude <Meters {7}> {Notation} +0000500
Timestamp <Date/Time{14}> {YYYYMMDDHHMMSS} 20000726142301
UTC Time Zone <Time Zone{4}> {Zone Notation} -05:00
GeoSpatial Code - GEOCode (Concatenated Data Field)
UTC Time Zone
GeoSpatial Code <GEOCode {46}>
{GeoSpatial Coordinates / Altitude / Timestamp w/UTC Time Zone}
1 0 7 7 0 5 2 5 1 0 0 3 8 8 4 6 8 6 9 0 0 0 0 5 0 0 2 0 0 0 0 7 2 6 1 4 2 3 0 1 1 0 5 0 0
Decimal Longitude
Decimal Latitude
Decimal Longitude Sign Integer + = 0 - = 1
Decimal Latitude Sign Integer + = 0 - = 1
Altitude Sign Interger + = 0 - = 1
Altitute
Year
Month
Day
Hour
Minute
Second
UTC Time Zone Sign Integer + = 0 - = 1

Fig. 26